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I.—EGGELING'S TRANSLATION OF THE ÇATAPATHA- BRĀHMĀNA.

The *Satapatha-Brāhmaṇa*, according to the text of the Mādhyandina school, translated by Julius Eggeling. Part I; Books I and II. (Vol. xii of *Sacred Books of the East*, edited by F. Max Müller.) Oxford (Clarendon Press), 1882. 8vo. pp. xlviii, 456.

This is a highly interesting and important volume: in fact, by far the most legitimate and acceptable contribution to the world's knowledge of the religious history of ancient Brahmanical India made in Müller's series of the *Sacred Books of the East*. In this department, at least, of the series the editor's selection is open to serious objection, on the ground both of what it includes and of what it omits. Thus, as regards the former, it is chiefly made up of works like the *Upanishads*, which have been repeatedly and well translated already, and are sufficiently accessible; or of those which, like the *Law-books*, however welcome as additions to Indian literature, are yet too loosely connected with religion to be fairly classed as " *Sacred Books* "; or of those which, like the *Bhagavad-Gītā*, fall under both these categories at once. Then, as regards omission, no *Vedic* text is either given or promised. Now if there was anything that the public counted on with confidence at the announcement of the series, it was that an English translation of the *Rig-Veda*, the earliest and beyond all comparison the most important *Sacred Book* of India, made by the editor himself, would be found among the volumes offered. We had already once been disappointed by him in our reasonable expectations on this very head: having purchased, in 1869, the first volume of a promised

translation in eight volumes, we had found it to contain only a paltry dozen of hymns (a seventy-fifth, instead of an eighth, part of the whole number), ingeniously padded out to the dimensions of a volume; and no continuation has ever appeared. It would be interesting to hear how Müller explains and excuses this capital omission. There is, to be sure, in existence a version, begun by Wilson and continued by Cowell, of the larger half of the Rig-Veda; but it is too little in accordance with the present condition of Vedic scholarship fairly to deserve the name of a version; and from the fact that nothing of it has been published during the last sixteen years, we are probably authorized to conclude that the continuator himself does not regard it as worth finishing. There are also two complete German versions, by Grassmann and Ludwig, both works of great merit; but neither is final or satisfactory, and they are vastly more inaccessible to readers of English than are versions of many of the works included in the series, in all its various departments. One may even question whether the outcome of the whole enterprise justifies the much-heralded magnificence of the plan, and whether the cause of science and letters is not at least equally well and efficiently served by private undertakings like Trübner's Oriental Series, and Oldenberg's Pali scriptures.

No one, however, will think of denying that, next after a Veda, a Brāhmaṇa has the best right to form part of a collection intended to illustrate the religious history of India. The Brāhmaṇas have been often enough described, and call for only a brief characterization here. In point of time they come next after the Vedic hymn-texts, accompanying rather than preceding the Brahmanic organization of Indian society and polity. They are products of the schools of priests, engaged in the practice and propagation of the sacrificial ceremonies, and in the study of their value and application. They describe the ceremonial, with more or less completeness and system, inculcating the importance of its several parts, explaining their reason and relations (frequently with discussion of varying views), professing to give their history; branching out not infrequently into legend, disquisition, philosophy, in a way that leads over by insensible gradations to the Upanishads. Their intent is not precisely prescriptive; the office of teaching the ceremonial belongs rather to secondary works, the Sūtras etc.; the Brāhmaṇas give the dogmatic basis of the vast and intricate science of sacrifice: a science whereof the excessive and puzzling intricacy, the minuteness and triviality of details, with the general inanity of their

exposition and justification, are beyond belief. We have here one of the aberrations of the human mind; but one which is, like the rest, of high interest and necessary to be understood—and the more, as it is a step in the religious development of a great and gifted people, who finally came to determine the religious belief of the larger part of Asia. Moreover, the Brāhmaṇas are the oldest body of Indo-European prose, of a generally free, vigorous, simple form, affording valuable glimpses backward at the primitive condition of unfettered Indo-European talk.¹ And their language is of an older cast than the classical Sanskrit, being in many respects intermediate between the latter and the yet older Vedic dialect. For these reasons, and in spite of their tedious inanity, which will soon satiate, if it does not disgust, the general reader, they are full of interest, almost of charm, to the special student; their ordinary *naïveté* is much more tolerable than the empty verbosity and make-believe profundity of the next following period of religious and philosophic thought in India.

The Brāhmaṇas form together a tolerably extensive literature. Each of the schools of the priests had in its keeping and tradition such a body of dogma; and a number of them have been put on record, or kept on record, and handed down finally to us, with the same reverent and successful care that was devoted to the Vedas proper, or hymn-collections, and with the same result, of a wonderfully conserved text, nearly free from errors and varieties of reading. The schools of the so-called Black Yajur-Veda have kept their *mantra* and *brāhmaṇa*, text and dogmatic exposition, as alternating portions of one and the same collection; but the schools of the White Yajur-Veda divided the two into separate works, as *Saṅhitā* and *Brāhmaṇa*; and the same method was followed by the schools of the other Vedas; it came to be the way that every school should have its *saṅhitā* and its *brāhmaṇa*, with the further addition of *sūtras* and other auxiliary literature. The Brāhmaṇas appear to be the products of one movement and period, considering the extent to which they agree with one another in language, style, and even contents. But it is still quite too early to attempt to define with any closeness their mutual relations, or determine their comparative age; and especially to be deprecated are the assertions sometimes made of a borrowing by one Brāhmaṇa from another.

¹ This part of their value has been especially brought out by Delbrück, in his works mentioned later.

They are all joint survivals out of one age of production and tradition; and another generation of scholars will pass, in all probability, before they will be sufficiently worked up to allow of our holding definite and defensible views as to their history. Editions, and translations like the one here before us, are the necessary prerequisites to such results. Not all of them are yet accessible in print. The first to appear was the Çatapatha (completed in 1855), forming one volume of Weber's great edition of the White Yajur-Veda. Then came the Aitareya-Brähmaṇa, of the Rig-Veda, by Haug (Bombay, 1863): a faulty text, now superseded by the excellent transliterated one of Aufrecht (Bonn, 1879); and it is understood that the latter scholar is at present engaged in preparing an edition of the Kāuśitaki-Brähmaṇa, belonging to another school of the same Veda. Of the Black Yajus texts, of mingled *mantra* and *brähmaṇa*, the Tāittirīya version has appeared, partly in Weber's transliteration (Berlin, 1872), partly in the series of the Bibliotheca Indica; and Schröder is now bringing out the Māitrāyanīya. The Gopatha-Brähmaṇa, of the Atharva-Veda, was issued in the Bibliotheca Indica in 1872. Of the Sāma-Veda works of this class, the Tāṇḍya or Pañcavīṇça was completed in the Bibliotheca Indica in 1874; a number of the minor treatises falsely arrogating to themselves the name of Brähmaṇa have been printed and in part translated by Burnell; and the same scholar has recently discovered in Southern India an immense work, the Jāiminiya or Talavakāra-Brähmaṇa, of which, by his kindness, all the known manuscripts are now in my hands, for transcription and examination; they are, unfortunately, insufficient to found an edition upon, except perhaps for the first part of the text. It is, of course, not impossible that other works of the class may yet come to light; but this is not to be hoped for with any confidence. Of them all, the Çatapatha is the most extensive, filling 934 large quarto pages in Weber's edition; the Jāiminiya, even including its Upanishad-Brähmaṇa (of which the Kena-Upanishad is a fragment, from near the end), is about a seventh less; the Aitareya has hardly more than a quarter of its content, and the other separate works are yet smaller; while the *brähmaṇa* portions of the Black Yajus texts are at any rate far less comprehensive than the Çatapatha.

The earliest translation of a specimen of *brähmaṇa* text was given by Weber, in the *Zeitschrift* of the German Oriental Society (vol. iv, 1850; reproduced in the author's *Indische Streifen*, vol. i, 1868): namely, the first chapter of the Çatapatha; this has since been for

many a scholar his introduction to a knowledge of the peculiar style of these works. The five volumes of Muir's Original Sanskrit Texts contain versions of not inconsiderable extracts from several of the Brähmanas: excellent specimens, though not completely trustworthy in details; and, for some of the works instanced, still the best or only bits of translation into English or any other European language. Haug's Aitareya-Brähmana text was accompanied by a translation: a work of considerable merit and still more considerable pretension; with valuable explanatory notes added, but with the actual version quite too hastily and carelessly executed, and in the English of a German who has learned the language pretty well. Delbrück's volumes of contributions to comparative syntax (*Syntactische Forschungen*, i-iii, Halle, 1871-8) also give numerous and often extended extracts, especially from the Çatapatha-Brähmana, rendered with a care and minute attention to the niceties of expression which is worthy of all praise; no other translator gives so lively a reproduction of the spirit of the Brähmana style. And a chapter of the Çatapatha, an immediate continuation of the part contained in the volume before us, and containing an account of the ceremony of consecration for the *soma*-sacrifice, has been given in German by Dr. Lindner (*Die Dikshā*, Leipzig, 1878); it is carefully and well done. The enterprise of Prof. Eggeling, then, is by far the most considerable that has been undertaken in this department. We only fear lest it may prove too considerable, and never be brought to a conclusion; the stout volume in our hands contains just one-fifth of the whole Brähmana, and the series of Sacred Books is nearly full, with no prospect held out of a continuation. A publication intended for scholars, paying no tribute to a superfluous "editor," and put at a price which would bring it more within the reach of those who most need it (for five volumes like this would, I believe, cost considerably more than the original text itself), would be a far more satisfactory work. To the general public, perhaps, a fragment of the Çatapatha is worth more than the whole of a briefer work of its class, for the Çatapatha is much the most interesting of the Brähmanas. But if a fragment here stands in the way of a completed work that might have been produced under other auspices, special students will have cause to regret its appearance; and the Brähmanas are at present ground for special students only; until these have compared them and worked out their results more fully, they can be only a matter of idle curiosity to the general reader.

Professor Eggeling has executed his task very well. He is a competent translator, in both departments of the work—in general accuracy of scholarship and familiarity with the Brāhmaṇa style, and in comprehension of the processes of the ceremonial and knowledge of its technical vocabulary, without which no scholar could make otherwise than a botch of such a piece of translation. His notes are valuable additions, casting light from the native commentaries upon the meaning of the text, referring to parallel passages of other Brāhmaṇas, or affording us occasional glimpses of the additional intricacies of ceremonial prescribed in the Sūtras, but passed without notice by the Brāhmaṇa, and doubtless at least in part later than its period and unknown to its authors.

As a matter of course, however, in a work of this extent, perhaps carried through under some urgency of pressure, there must occur slips and oversights, as well as occasional misapprehensions of meaning, which one going over the text after the translator and with his assistance may discover ; besides passages of difficult and doubtful interpretation, as to which the views of different students will for some time or always continue to be at variance. A second translator stands in a manner on the shoulders of a first, and may hope to see some things hidden from him. And as I have happened to have occasion to go over the text of the Brāhmaṇa in company with this translation, and have noted the points in it to which I was obliged to take exception, I propose to assemble and present the main part of them here in detail.

One is now and then a little uncertain whether the translator has not a different text before him from that of the published edition ; he even once or twice in his notes quotes a different reading without giving any explanation (so at I v 2. 20; II iii 3. 1). Now considering that the published text is the only one that most scholars have and will for a long time to come have in their hands, and that it is in general admirably correct (quite marvellously so, in fact, in view of the time and the stage of study at which it appeared), it is obviously Prof. Eggeling's duty, if he has found any errors in it, or has on manuscript authority better readings to propose, to point them out clearly and account for them in every single case. We do not know, otherwise, that he has not himself committed a slip. At I v 1. 23, for example, is *purāvdsur ha* of the edition right, or has the translator another text which he has a right to render 'Formerly . . . Parāvasu'? And at II vi 3. 1, does he read *yajati* with the printed text, or *jayati*, as he translates ('gains it')?

Of real oversights, which more time for revision would doubtless have removed, the most notable is seen at I ii 5. 24, where, against the clearest evidence of the connection and the accent, *ne”jire*, 'did not sacrifice,' is rendered by 'washed their hands' (as if *ninijire*). Prof. Eggeling has doubtless long since corrected this in his own copy. It is one of those mishaps that can occasionally befall even an accurate and careful scholar. In a few cases a word or phrase is incorrectly translated at one place, though correctly at others: thus, *dvaydm* is rendered 'twice' at I viii 3. 14, though 'for a double reason' repeatedly afterward (I ix 1. 1 *et al.*); and *yāt* 'sām iyām jītih' is made to mean 'when they had conquered' at I vi 2. 1, 2, while in its frequent occurrences later (cf. II iv 4. 15) it is correctly understood. It must have been, too, from a momentary forgetfulness of the ordinary use of *bāndhu* that at I iii 1. 22 *eko vā utpāvanasya bāndhuḥ* etc. is not translated 'one and the same [everywhere], indeed, is the significance of cleansing: he makes it thereby sacrificially pure' (cf. III vi 1. 11, correctly rendered by Delbrück, *Synt. Forsch.* iii 70). Here and there, a word or phrase or sentence is left untranslated; but none of the cases are of any special consequence: thus, we have *nuttds* omitted at I vi 3. 13, *ūrdhvām* at I ix 1. 27, *āhnas* at II i 3. 1, *dakṣiṇēna* at II v 2. 38; and longer omissions occur at II i 4. 22; ii 1. 8; iii 3. 18, 20; v 1. 11. One grammatical form is occasionally confused with another: thus, *nenijati* is rendered as singular at I iii 1. 3, and *akrata* at I ix 1. 11; *dveṣmi* as plural at I v 4. 12, and *juhuyāt* as 1st plural at II iii 1. 14. More important is the not very infrequent inaccurate rendering of the aorist: either as a simple preterit, as at I iv 1. 39; viii 3. 11, 17; ix 1. 20; 3. 10, 12; II vi 1. 15; or as present, as at II iv 1. 11; 2. 11; or, what is much worse, as optative at I vii 3. 10, 11; II i 4. 19, 20; ii 2. 17; v 2. 47. On the contrary, a subjunctive or optative is turned into an aorist or present indicative at I vi 3. 26; II iii 4. 21. Some of these mistranslations may repose upon the authority of the native commentator; but that does not in the least change their character; the authors of the Brāhmaṇa are precise and consistent enough in their use of the verbal forms to require to be implicitly followed.

A more careful attention to the accent would in a few instances have prevented an error or cleared up a difficulty. Thus, at II iii 1. 11, the accent of *upajīvāmas* requires us to read 'of this life-giving juice, which, being theirs, we here live upon.' At II iv 3. 13, the accent of the first *yājeta* entirely removes the translator's

difficulty "how to account for the *vā*": read 'if he have [already] sacrificed, or if he be now sacrificing with the new- and full-moon offerings, then let him sacrifice with this.' At II vi 2. 16 we have, as the accent shows, *vi lipsante*, not *vi-lipsantas*, and the word is coördinate with the two that precede and follow it. But the most striking case is at II ii 2. 20, where Eggeling makes utter nonsense of the passage, but in a note at the end of the volume amends it from Delbrück, who had long ago rendered it correctly. This is not the only indication that the present translator has not been duly heedful of this one of his predecessors; at I viii 1. 4, in the story of Manu and the flood, while quoting the opinions of several authorities, he takes no note of the best and only acceptable one, that of Delbrück (also adopted by Böhtlingk): namely, that the sentence *qdqvad . . . vārdhate* is an interpolated gloss: "surely that was a *jhasha*, for he grows biggest."

A few scattering cases of a similar character may be noted. 'Sacrifice,' instead of 'sacrificer,' for *yājamānam*, at I v 2. 15, is perhaps a misprint. At I ix 2. 12 *jighatsanti* is desiderative, not intensive: 'for this reason these human wives like to eat out of sight [each] of her husband: "whoever do, they do": so forsooth Yānavalkya says' (of the last clause, which Eggeling omits to render, the meaning is not altogether clear; perhaps it is 'but if any do this, then certainly they [*i. e.* the wives of the gods, who are talked about here] do it'). At I ii 1. 12, it is hardly proper to render the neuter *caturthdm* by 'fourth world'; it is rather something more indefinite: 'fourth thing or space' (it is called *pāram bhās* at I ix 3. 10). At I vi 3. 33, the gender of *ūttarām* shows that the 'following night,' not 'day,' is meant. And at II i 1. 7, the gender of *etāsyā* proves it not to belong to a *cri* understood. Again, it is doubtless a grammatical impossibility to use the past passive participle as a present active one; and hence the translation of *īditām* by 'praising,' in the rather obscure passages I v 3. 11; 4. 3 is not to be approved; we may perhaps render in the former case thus: 'in this way, namely, are the rains the *id*'s: this petty crawling vermin that is left desolate by summer and winter goes about during the rains (the acc. pl. seems to be used distinctly in this adverbial sense in the next paragraph), seeking, as it were, prayed-for (*īditām*) food.' But even this is not satisfactory. The analogy of I vi 2. 3, *et purodāçam eva kūrmām bhūtvā sārpantam*, 'lo! the sacrificial cake creeping about, having become a tortoise!' seems to show that in those excessively rare cases in which a gerund

is made the adjunct of an object-accusative, a predicate-noun added to it would be (as it is natural to expect) also in the accusative: is it possible, then, to understand with Prof. Eggeling that *asāv evāi 'tād bhūtvā 'nv āha* (I iv 2. 18; and a similar phrase in 19) means 'by it he recites that which is yonder sky'? I would prefer to render the paragraph thus: 'he repeats, indeed, standing; for he does repeat it; yonder [sky], namely, is the invitational prayer; so then having become yonder [sky] he repeats it; for that reason he repeats standing.' That is, he must stretch himself aloft like the sky (cf. below, I iv 4. 12), in order to repeat a formula that is like the sky. As in the last passage but one, the translator makes everywhere bad work with the particle *ād*, apparently regarding it as a verb-form from the root *i*; and so, at II ii 3. 3; iii 4. 2 he gives a spiritless as well as inaccurate rendering of the colloquially lively sentence: "here we come again," said the gods; and lo! Agni out of sight!'

It is not always easy to recognize the joints of these broken sentences; nor, indeed, are they perhaps in every instance to be determined with certainty; and further, Prof. Eggeling may have preferred sometimes to disregard them for the sake of the readability of his English text. Hence, although I had noted a number of cases in which another division than that apparently recognized by him appears preferable, I will mention but one or two (apart from those which appear in other connections, above and below). Thus, at the end of I vii 1. 3, we ought doubtless to connect *upā hū dvitiyō 'yatt' ti* with what precedes, as the (etymologizing) reason given by those who add the formula *upāyāva stha*. Again, at II i 2. 12, we may better divide thus: 'Let him set up his two fires under Hasta whose wish is "let there be giving to me"; surely that [is given] directly which is given with the hand (*hasta*): he, verily, receives gifts (lit. there is giving to him).' More serious is the misapprehension at I ix 2. 27, where *yātra-yatrā "sām cāraṇām tād ānu* belongs to what precedes, and signifies '(them he thereby dismisses in due form) to go about their several businesses.'

Of renderings of single words and phrases more or less objectionable, a number may be instanced. 'Wanes,' instead of 'waxes' (*ā pūryate*), at II iv 4. 19, is doubtless a mere slip of the pen; also 'overtly,' for 'covertly' (*parōkṣam*), at II i 2. 11. The word *ātmān* is not seldom translated 'body,' an inaccuracy that might easily be avoided. For *kapāla* is regularly given 'potsherd,' instead of 'cup, dish'; this seems an unfortunate adoption from Haug; surely Prof.

Eggeling does not suppose that the Brahmans made their offerings on fragments of broken pottery? 'Means of salvation' for *bheṣajdm*, 'remedy' (I ix 1. 27), has a too theological sound. It is an oarsman, rather than a "steersman," that impels (root *aj*) a boat (II iii 3. 15, 16). To render *ūrj* by 'sap' (II iv 2. 1), and *nirvīrya* by 'sapless' (II i 2. 9), is to strain undesirably the meaning of the English word *sap*. 'Equipment' is an unhappily chosen word for *sambhārd* (II i 1. 1 etc.), since *sām bharati* means simply 'brings together, collects,' and has no transitive force, such as belongs to 'equips'; but it is not easy to find an acceptable substitute. II ii 4. 2 *agnitā*, 'Agnihood,' is too pregnantly rendered by 'origin and nature of Agni.' So at II v 2. 25, *dva yajāmahe* hardly has so much of its etymological force left as to call for the rendering 'expiate by offering'; nor, in the same passage, can there be good reason for making *indriyē* mean 'in our own self'; and *vā . . . vā* (as also at II iii 4. 6) is inaccurately represented by 'both . . . and.' At II iii 4. 18, the translation 'injures' seems colorless, for the frequent technically used term *dva dyati*: rather ('makes a cutting from,' *i. e.*) 'takes away a part of, diminishes.' At I ix 3. 2, *çānti* is not 'lustration,' but 'allayment, extinguishment of fire or heat.'

More definite misapprehension of meaning is seen in the following cases. At I iv 3. 8, *antasthā* is not 'internal motive force,' but simply 'intermediate, central,' from which movement in both directions takes place. At I v 4. 1, *abhi mr̥ga*, not 'stroke thyself,' but 'touch him, feel him'—namely, any person whose condition is to be determined. A similar rendering of an active as middle is seen at II i 1. 5: *dhāvayati*, 'cleanses oneself.' In more than one place, *āgam* is faultily treated: thus, at I vi 4. 2: 'him Agni discovered; with him he arrived on that night' (not 'stayed with him as a guest that day and night'). Then the next paragraph goes on quite unmistakably: 'So the gods said: "at home with us to-day is staying our Vasu, who has been staying away from us,"' and they proceed to cook a dish for the two, as any one does for two friends who have come to stay (*āgata*: this time correctly rendered) with him. Similarly at II v 3. 20, not 'went forward,' but 'arrived.' At I vii 3. 28, *tr̥peyam* is evidently not 'May I satiate myself,' but 'I should be satisfied, along with and as a consequence of (*dnu*) the satisfaction of the priest': *dnu* in such phrases has a peculiarly pregnant force which cannot be rendered briefly: if one thing is done, another comes 'after,' follows, is its necessary sequent and consequence. *Sāmi*, at I vii 4. 3, does not mean 'half of,' but 'mid-

way, prematurely,' as the translator himself renders it at II iii 3. 4 (and might have done also elsewhere, where he uses some less acceptable phrase). In quite a number of instances, *pára* and *párdas* and their kin appear to me to be inaccurately rendered, by 'on high,' 'backward,' and so on; their fundamental idea is always that of remoteness, afar, away. Thus, at I ix 2. 32, 'the sacrifice, moving off (not 'backward') without being unyoked (Prof. Egeling here overlooks the negative prefix in *dvimukta*), would injure the sacrificer.' Another example or two will appear below. At II i 1. 7, *tátas* is rather 'from there' than 'there'; and similarly, at II vi 1. 11, *sarvádas* is rather 'from all sides come' than 'on all sides are.' At II i 2. 5, *sámrddhás*, 'increased,' is quite insufficiently represented by 'have.' At II i 3. 9, *úpa namet* must be, as the translator gives it elsewhere, '(whenever the sacrifice) proves favorable to him, goes as he would have it' (not 'when he feels called upon to sacrifice'). At II ii 2. 6 (*et al.*), *çuçruváñso 'nucáñás* (lit. 'having heard, having repeated') is hardly 'who have studied and teach,' but 'who have heard and studied.' At II ii 2. 13, one would not suspect that the word used of the fire and rendered 'eat' is simply *daha*, 'burn'; and *bhuñjate* is rather '(whereby men) enjoy their food.' At II iii 4. 6, *áçáñsamána*s is not 'praising him, thinking,' but simply 'hoping' (cf. Delbrück, I. 1. iii 10). The gerundive *samáháryá*, at II iii 4. 16, is inadequately rendered by 'collected'; nor is it possible to believe that any reference to extraction from the Rig-Veda is contained in the word. In the *dháraña* of *kámadháraña* at II iii 4. 34 cannot inhere any meaning of 'fulfilment'; the interpretation given of the phrase by the Brähmaṇa itself shows that the compound is to be understood as 'maintenance of affection.' At II iv 1. 11, both grammar and the connection forbid us to understand *paridámm ma idám* by 'to give himself up to him': read rather '(he has come) in order to give this into my charge.' 'Tamper' is a very weak word with which to render *vi math* (II iv 2. 14), which means rather 'shake to pieces, break up.' In II iv 2. 20; vi 1. 36, *á vṛṣayata* is translated 'like bulls come hither,' instead of 'pour down,' according to the more general and preferable opinion (cf. I vii 2. 17). Surely, there can be no justification for giving 'regions' outright as translation of *harítas* at II v 1. 5; whatever glimmer of that sense the word may seem to have in the later language comes doubtless from the traditional misinterpretation of this very Vedic phrase; Ludwig renders 'the green ones,' *i. e.* the plants, which is not implausible. In the next paragraph, *áda-*

yanti is not well translated by 'nurse': read 'moreover, those that have no milk, they make their young eat (*i. e.* supply them with food in other ways).' At II v 1. 19, *agnim . . . jāyamānam* *ānu* is not 'after Agni was born'; but the *ānu* has the special and pregnant sense pointed out above (in connection with I vii 3. 28). At II v 3. 17, *upā hanti* cannot mean 'cuts out,' whatever else may be the sense of it. In the next paragraph, *vṛṣabhadām āhvayitavāt brūyat* is certainly not 'let him tell the sacrificer to make a bull roar,' but 'let him give orders to call a bull'; and then, if the bull, thus invited or coaxed to the spot (perhaps by offering it food), is pleased to bellow (*ruyāt*), certain results follow. At II v 4. 3, *tējas* is rendered by '(shaped into) a sharp point,' and, five paragraphs later, in an equivalent connection, by 'fiery glow': the latter, or something like it, is doubtless better at both places. At II vi 1. 15, *trayān* is not 'three,' but 'three kinds of (Fathers).'

Prof. Eggeling does not seem fully to recognize the idiomatic verb-phrase formed by a present participle with the verb *i*, 'go,' and not infrequent in the Brāhmaṇa language; for though he renders such a phrase correctly at I i 4. 14, he laboriously translates the form of *i* independently at I iii 5. 8; II i 4. 18; ii 1. 18; thus, at the place last mentioned, 'since he moves in the ascent of these worlds' should be 'for he goes on ascending (keeps ascending, is continually ascending) to those worlds.'

Another extremely frequent idiom of the Brāhmaṇas, used in connection with their numerous attempts (generally most artificial and unfortunate) at etymologies, is this: 'that is (or therein lies) the so-and-so-ness of the so-and-so'—meaning, 'that is the reason why so-and-so has this name.' Either Prof. Eggeling has overlooked this (which is scarcely credible), or he has against the ordinary way of understanding the phrase some objection, satisfactory to his own mind, but which he also certainly owes to his readers to explain. Thus, at II i 1. 1, *tāt sambhārāṇām sambhāratvām* is translated by him 'that is the equipping (of the fire) with its equipments'; but it really means 'that is why the *sambhāra*'s are called *sambhāra*'s'—namely, that one brings them together (*sam bharati*), collects them, from a variety of quarters (other examples at II i 2. 6, 17, 19, etc.).

The frequent recurrence of the phrase *yūpēna yopayitvā* (I vi 2. 1 *et al.*) calls repeated attention to the unacceptableness of the present prevalent rendering of the root *yup*, as 'smooth over, efface the marks of.' How the setting up of a post should operate to

'efface traces' cannot easily be made to appear. 'Set up an obstacle, block or bar the way' certainly suits the connection vastly better. This was the meaning given originally to the root in the Petersburg lexicon, but later withdrawn, for some reason not apparent; Ludwig is to be praised for adhering to it in all the Rig-Veda passages where the root occurs.

To render *videgho ha māthavd̄h* by 'Māthava the (king of) Videgha' (I iv 1. 10 ff.) is not to translate the text, but to amend it. By invariable Brāhmaṇa usage, the name proper stands first: 'Videgha, the Māthavan.'

At II iv 2. 1-3, in the distribution of Prajāpati's gifts to the three classes of beings, one *vas* is omitted in the first verse, and the construction is misunderstood in the second and third. We ought to translate: (to the gods) 'be the offering your food; be immortality yours, strength yours, and the sun your light'; (to the Fathers) 'month by month be your food; be the ancestral oblation (*svadhā*) yours, thought-swiftness yours, and the moon your light'; (to men) 'at evening and morning be your eating; be progeny yours, death yours, and the fire your light.'

It is (as already intimated) by no means impossible that some of the renderings here objected to may have the support, or be due to the authority, of the native commentary. That makes, however, no real difference; it is a translator's first duty to be faithful to the text itself; a marginal note, giving the commentator's interpretation, would be sufficient satisfaction of the latter's claims. A striking, and by no means unimportant, example of how far Western translators can be misled by native authority is furnished at I viii 3. 6, which Prof. Eggeling (like more than one predecessor, and for the same reason) regards as having to do with "the prohibition of marriage between near blood-relations," and as showing that this was less strictly enforced in the ancient time than later. The general subject under discussion is the treatment of two sacrificial spoons, which in a certain ceremony are separated from each other, the one being moved in one direction and the other in another. After its ordinary fashion, the Brāhmaṇa attributes profound meaning to this act, connecting the two spoons with two opposing parties, and making the movements of the former help determine the fortunes of the latter. The two parties are styled *attā*, 'he who eats,' and *ādyās*, 'he who is to be eaten'; and the paragraph in question goes on further about them, in Eggeling's translation: "Thus the separation (of the eater and the eaten) is effected in one

and the same act ; and hence from one and the same man spring both the enjoyer (the husband), and the one to be enjoyed (the wife) ; for now kinsfolk (*jātyāḥ*) live sporting and rejoicing together, saying, ' In the fourth (or) third man (*i. e.* generation) we unite.' And this is so in accordance with that (separation of the spoons)." The reference to prohibited degrees of kinship is here certainly of the obscurest, even upon the translator's showing ; and underneath this are hidden a number of insuperable difficulties. In the first place, we are called on to believe that the masculine *ādyās*, ' he who is to be eaten,' can be used to mean ' a wife ' ; then, that the plural noun (*jātyāś*) and verb (*śām gachāmahe*) can refer to a married pair and its action ; and finally, that *dīvyamānā āsate* means ' live sporting and rejoicing,' and not simply ' sit gambling.' There appears to be no passage quotable from a genuine Sanskrit work in which a form or derivative of the root *dīv* means anything but 'gamble' ; that such are found and given from the grammarians and the *Bhāṭṭikāvya* only shows that they do not exist elsewhere. The Petersburg Lexicon claims to have one from the *Atharva-Veda* ; but, when rightly understood, it is quite otherwise, and helps the real comprehension of our present passage : *yó no didēva yatamō jaghāśa* (v 29. 2), ' he who has played (gambled) with us, whoever has devoured us'—there follows an imprecation on him. It seems clear, then, that *ādyā* signifies the person to be pillaged, or drained, or stripped of all that he has ; it is used for ' liable to contribution or taxation ' below, at V iii 3. 12 *et al.*; and both *ādyā* and *attr*, 'the pillager,' at V iv 4. 20, 21, in a parallelism of a certain ceremony with a gambling operation. The word *videvdm* (which the Pet. Lex. regards as a gerund : this, however, would require the accent *videvam*) does not appear to be met with elsewhere ; it doubtless signifies either a 'big game' or 'a foul or false game.' And the (sufficiently trivial) meaning of the paragraph seems to be that, as the two antithetical spoons are implements in the same ceremony, so both parties at play, the sharper and his victim, are often relatives ; and they talk of it together ; the sharper especially, of course, being very sociable and fraternal until the result of his plans is reached. The paragraph, then, should be translated as follows : ' Now this separation (of the spoons) is made in the same ceremony ; and for that reason are born from one and the same man both the pillager and he who is to be pillaged ; for even now " we meet in the fourth man, in the third "—talking thus, relatives sit gambling with foul play ; that is why that is so.'

The rendering of *anu* by 'behind' in the preceding paragraph (I viii 3. 5), as in other similar places in the text—'behind the *juhū* [stands] the sacrificer, and behind the *upabhṛt* [stands] he who means evil to him' (the verb 'stands' is supplied)—is not wholly to be approved; though it might pass well enough if accompanied by a word or two of explanation. It is the same pregnantly used *anu* already once or twice referred to; it denotes such a connection between the two things mentioned, and dependence of the one on the other, that whatever is done to the type will be necessarily followed by a corresponding effect upon the antitype.

At I i 1. 21 (middle) is a somewhat blindly constructed nexus of clauses, which Weber as well as Eggeling appears to me to have resolved not quite correctly. Both commit the grammatical error of taking *āpas*, 'water,' as accusative instead of nominative; and *yātrā 'sya* doubtless means 'wherever of it': *i.e.* 'at whatever part of it' (cf. *yātra vā asyāi kvā ca*, 'at whatever point of her,' III i 1. 4; and such phrases are not very rare elsewhere). Hence we should read: 'if he were to carry it past and set it down: there is verily a sort of enmity between fire and water; and he—as that [enmity] arises on the part of the fire wherever water comes in contact with it—would increase the enmity of the fire, if he were to carry past and set down.'

The paragraph I iii 5. 14 is not very successfully translated. *Vdcas* is 'voice,' not 'strength'; and the point made is, that if he were to design and attempt to recite the whole passage without taking breath, and then were to fail in it, the failure would be attended with direful result to the sacrifice. And hence (par. 15), if he cannot trust himself to do that (not 'do not care to undertake this,' as Eggeling has it), he had better plan to recite each separate verse with uninterrupted breath. Hence read: 'According as his voice is, so should he plan to recite. In this there is a slip [possible]: if, namely, he should draw breath prematurely, when intending to recite without drawing breath, the ceremony would be spoiled: that is the slip.' It may be added that, at the end of par. 13, *eva 'smin* is overlooked by the translator; read: 'thus puts it in him prolonged, not cut off.'

The last sentence of I iv 5. 11 would read more accurately: 'and it is of a superior that an inferior imitates the acts and follows in the wake.'

At I v 1. 13, *mānusa* does not mean 'man,' but 'human,' as distinguished from divine: 'With the words "so-and-so is the human

(*hotr*)," he then selects this human *hotr*.' Compare I viii 3. 10, where the term is properly understood and rendered.

At I vi 1. 4, a better understanding would be: 'That, now, was an offense to the gods; "for less than this," said they, "enemy seeks to injure enemy; how much more, for what is on such a scale as this! Contrive ye how this may be otherwise than thus."

The paragraph I vi 3. 26 is rather heedlessly treated: the accent of the first *āpnōti* is overlooked (read: 'whichsoever two of them he gains by means of the two butter-portions'), and *ahorātrē* and *ardhamāsāū* are entirely left out in the two following clauses: the rendering of *asat* later by 'has been,' as if it were an aorist indicative, was noticed above.

At I vi 3. 33, the meaning and connection of the clause *sò 'nya-toghāty ēvā syāt* is missed; translate: 'as if one were to crush one moving with his back turned toward him and not attacking in return—[for] he would just strike in another direction—so it is with him who fasts the following night.' That is to say, a person who has his front turned away from his assailant can, even if he deals a blow, only hit something else, and not the assailant.

The latter half of I viii 2. 8 involves sundry inaccuracies in the translation as given, and is rather to be understood thus: 'So, on whatever occasion the metres gratified the gods, then the gods gratified (this verb is not accented, as Eggeling's version would imply) the metres. Now it has been some time previous to this that the metres, harnessed, have carried (aorist) the sacrifice to the gods, have gratified the gods'—and so the text proceeds to point out, in the following paragraph, how the metres have now their turn at being gratified.

The last two sentences in I viii 3. 12 seem to call for correction. Read: 'Let him take it up, then, with this [text]; for whosoever the rain anoints him (or it), it makes him thereby an oblation, with the view "becoming an oblation, let him go to the world of the gods."

The phrase *ūpa hī vāge labdhvā* (I ix 2. 35, middle) cannot possibly mean 'when it occurs to him'; the sense is rather that he who is simply left without a share waits a while in expectation of one, and then helps himself, assuming that he is to have a share, and might as well take possession of it without more delay: 'he waits so long, and then, taking it into possession, says "What share hast thou given me?"'

The passage I ix 3. 9-12 presents various difficulties. The sacrificer is to take the three strides of Vishnu, by which that god is

thought to have taken possession of the three worlds, repeating at each stride a certain verse; and he is allowed to do it in either of two directions: from a certain nearer point outwards, or from further off hitherwards. In the former case, which we are informed is the more usual way, he represents Vishnu striding from earth to atmosphere and sky, and repeats his verses accordingly; in the latter case, he is Vishnu striding from sky to atmosphere and earth, and the order of the verses is reversed. The final sentence of par. 9 means, then, not 'Now it is indeed from this [earth] that most [beings] go [upwards],' but 'Now it is in the direction away from here that most people take the strides' (cf. for *bhuīyisthā iva* II iv 1. 9, where Prof. Eggeling translates more correctly). Accordingly, *tdd u tdt*, at the beginning of both 10 and 12, means 'then in that case [he says as follows]': Eggeling translates it the first time by 'Hence [he strides thrice],' and the second time by 'And in this way also [he may stride]'. The inaccurate rendering of the aorists in the repeated verses has been already referred to; not 'Vishnu strode,' merely, at some indefinite time in the past; but 'Vishnu has strode,' just now and here, in my person. Toward the end of par. 10, after the reasons are given for striding in this way, the other and alternative way is introduced: 'On the other hand, hitherward from further off may stride he who wishes to give instruction (? exercise authority? inflict punishment?) from here. There is a double reason why one takes his strides hitherward from further off.' But the first of these reasons is obscure, owing to the questionable meaning of *apasaranya*; while not convinced by Eggeling's translation, I am unable to put anything more satisfactory in its place.

At II i 2. 9, the clause *tād iṣuṇā trikāñdenē 'ty āhus* seems best understood as a parenthesis, perhaps an interpolated gloss: 'Now when they then pierced him—and that, they say, with the three-jointed arrow—he abandoned,' etc. In the next paragraph, the translator has evidently overlooked one of the negatives. I would suggest: 'It (the asterism) is not, surely, the refuse of that god (the slayer of Prajāpati), nor unholy, nor the body that [was] Prajāpati's.'

It appears altogether probable that the phrase *yāç ca vēda yāç ca nā*, at II ii 3. 1 and elsewhere, is an adjunct of the subject of the following *āhus*: 'therefore they [all], both he who knows (i. e. really comprehends what is meant by it) and he who does not, say "King Varuna."' This understanding is strongly supported by

what follows, which should be rendered thus (Eggeling's version is quite unacceptable): 'Soma [did the same] when desirous of glory; he became glorious; therefore, whether one has a share in the *soma* or whether he has not, they both alike come (*i. e.* to a *soma*-drinking ceremony): what is glorious, namely, they thus come to see.'

At the end of II ii 3. 4, the translation is certainly not to be approved, although the real meaning is not very clear. Perhaps 'but [to him], indeed, other beings, in whatever numbers, have recourse.'

In II ii 4. 3, *adyāt* is used rather in an optative than in a conditional sense: 'than myself—whom, by all means, let him not eat!'

In the last part of II iii 1. 7, the right division and connection is not carefully maintained. Read, rather: 'from that the gods go away; now that turns out a failure for him, from which the gods go away; and of his failure people—both he that knows and he that does not—say: "the sun has gone down on his fire not [yet] taken out." ' Earlier in the same paragraph, we should understand: 'those rays, doubtless, are all the gods' (not 'the rays, doubtless, are all those gods').

At II iii 2. 3, certain improvements seem called for: 'Moreover, this fire which is in the hall, that is *Anaçnant Sāṅgamana* (*i. e.* 'the non-eating assembly-fire'): now because they gather about it without eating at all, therefore it is *Anaçnant*. Further, these ashes which they take out and throw away, that is *Asant Pāñsava* (*i. e.* 'the non-existent dusty one').'

The clause *svayām vāi tēṣām sahā yēṣām sahā*, at II iv 2. 19, is obscure; but it can hardly have the meaning which Eggeling attributes to it: namely, 'since he himself is one of those to whom [it would be offered] in common.' For in that case, the phrase *yē ca tvām dnu* might be added, without any reason to the contrary, to the dedications to grandfather and great-grandfather; while yet it is not so added: hence the objection given ought to be one that applies equally in all the three cases. There is also reason for not taking *dnu* as 'after' in the way in which one generation comes 'after' another; for then an offering to the great-grandfather would be also made to the grandfather and father, and separate offerings to these latter would be unnecessary. Perhaps, then, rather 'and those that are dependent upon thee, or accompany thee'—with a vague reference to other relatives of that generation, with whom the direct ancestor may consort. Then the objecting clause would

mean 'for he himself (or 'of himself,' without needing to have it specified) is in company of those of whom he is in company'—that is, if there are any whose association with him would entitle them to a share, the association will procure them that share; they do not need to be specially invited.

The translation 'through the one (he created) the upright, and through the other those looking to the ground,' for *itdç co "rdhvå itdç cå 'våcis* (II v 1. 11 *et al.*), does not seem to me acceptable, but I am uncertain what to put in the place of it.

How *pínakåvara* at II vi 2. 17 can be made to signify 'muffled up' is an insoluble mystery; the repeated use of *avasá* 'provision (for a journey)' in this paragraph shows pretty clearly that it means '(with thy bow unstrung and) with thy staff as provision.' One would like to understand 'with staff and provisions'; but no copulative compound is convertible into a possessive.

To notice briefly a point or two not specially connected with the Brāhmaṇa. In a note to I iv 2. 17, Prof. Eggeling expresses his opinion in favor of understanding the common epithet *jåtåvedas* to mean 'he who knoweth [all] beings.' The same is Grassmann's usual rendering ('Wesen-kenner'); it is rather favored in the larger Petersburg Lexicon, and definitely adopted in the smaller; and it is met with, perhaps increasingly, in the works of recent scholars. The word may, indeed, fairly be regarded as an obscure one: that is to say, it is very strange that an appellation so frequently applied to Agni should not have its meaning distinctly pointed out, either by its applicableness, or by parallel expressions used in the descriptions of the same god or in ascriptions made to him; but no such explanation has been found obtainable from the Vedic writings. Nevertheless, it seems to me that the translation 'being-knower' is to be regarded as unacceptable; because *vådas*, in all its distinct and unmistakable uses, those which should be decisive of its value in other more doubtful connections, means only 'acquisition, possession, wealth' (from *vid* 'acquire,' not *vid* 'know'). By its accent, the compound must be a possessive (it could arrive at the sense of 'being-knower' only through the intermediate 'having knowledge of beings'): either, then, 'having born or native wealth,' or 'having whatever is born as his property, all-possessor.' The explanation of *nåkṣatra*, 'asterism,' as equivalent to *nakta-trå*, 'night-protector,' is in a note to II i 2. 17 pronounced "probably correct"; to me it seems an unacceptable conjecture, opposed by phonetic form, accent, and sense. Much better pass the word as obscure than accept such an etymology.

In conclusion, the wish may be expressed that Prof. Eggeling had followed the simple and broken syntax of the Brāhmaṇa somewhat more closely, giving his version less the character of a paraphrase. He defends the method he has followed in his Introduction (p. xlvii); but he seems to exaggerate the difficulty of making a tolerable English version with preservation of a little more of the peculiar flavor of the original text. To taste the latter, one must go, as things are, to the German renderings of Delbrück. The question, however, is one of taste; and many readers will doubtless be better satisfied with the translation in its present form; the essential thing, at any rate, is that the meaning be faithfully rendered.

The method of transliteration followed in this, as in the other volumes of Müller's series of Sacred Books, is wholly to be condemned. It is the general editor's own so-called "Missionary Alphabet"—a mixture, too awkward and ugly to be tolerated, of roman and italic letters and small capitals in the same word. The original device was, to be sure, an ingenious one; and the alphabet has its own proper sphere of usefulness, as indicated in its name—that is to say, in cases of exigency, where the resources of a well-furnished printing-office are wanting, and one has to accept and be thankful for the best means of distinction that are available. But it was certainly a grave error of judgment on Müller's part to impose its use upon the wealthy Clarendon press, and in these handsome and costly volumes.

W. D. WHITNEY.

II.—ON THE LOCALITY TO WHICH THE TREATISE OF PALLADIUS *DE AGRICULTURA* MUST BE ASSIGNED.

The difficulty which exists with regard to the question with which we have headed this paper will be better understood by a reference to the article of Weiss in Michaud's *Biographie Universelle*, in which it is stated that Palladius (*Rutilius Taurus Aemilianus*), one of the most ancient writers on agriculture whose works have come down to us, is, according to Barth and Dom Rivet, the same as Palladius, the son of Exsuperantius, prefect among the Gauls.¹ The majority of critics have adopted this conjecture, which is, however, founded merely upon an identity of name. On the other side, those who suppose Palladius to have been born in Italy, and that he flourished towards the middle of the second century, can bring no solid proof to support their opinion. So that the origin of this writer is uncertain. If we may believe Dom Rivet, he was born at Poitiers at the commencement of the 5th century,² and after training in eloquence according to the Gallic schools, he went to Rome to study jurisprudence. After the death of his father, who was killed in 524 (an evident error for 424) in a riot, it became a matter of indifference to Palladius whether he lived in Gaul or Italy, and it is believed that he settled himself in the neighborhood of Naples. He informs us himself that he possessed landed property in the suburbs of that city and in Sardinia, and that he himself superintended the cultivation of his estates.

Thus far Weiss in reference to this interesting writer, whose works have been but rarely edited. It will be observed that Weiss holds the reference of Palladius to the 5th century and to the locality of Gaul as a conjecture founded upon a similarity of name.

Schneider, who edited the work of Palladius in his *Scriptores Rei Rustici*, Lipsiae, 1795, maintains, with Gesner, against the opinion of Mylaeus, that Palladius is not a contemporary of Pliny

¹ See article 'Exsuperantius' in Michaud, and Note 1.

² See *Rutilius Itinerary*, I 208, and Note 2.

and Quintilian; and against Ludovicus Vives, that he is not to be placed in the reign of Adrian; but he does not believe Palladius to be a native of Gaul. "Gallicae patriae *nullum plane vestigium* in opere suo signavit Palladius, nisi forte *huc trahere velis ligni Gallici asseres* (I 13, 1), vel messorii vehiculi descriptionem quo pars Galliarum planior utebatur" (VII 2).¹ Now Schneider's first illustration is a peculiarly unhappy one, for the passage, quoted more at length, advises that in building your country house you should employ materials which lie ready to hand, *ex ea materia quae facilius invenietur*, and therefore the writer recommends planks of French pine or cypress: "asseres ligni Gallici vel cupressi directos et aequales constituemus in eo loco, ubi camera facienda est." Moreover, that the writer is not an Italian is evident from the first words of the second book: "Januario mense locis temperatis ablaqueandae sunt vites, *quod Itali excodicare appellant*, id est circa vitis codicem dolabra terram diligenter aperire," etc. But we are able to approach this question in another direction than that of linguistic criticism, for Palladius has given us at the end of each month a table of the lengths of the shadows in the sun-dial for the various hours of the day and from month to month.

In the Aldine edition of Palladius, printed at Venice in 1472, a small tract is appended by Aldus to explain the system employed by Palladius for the division of the hours, and also showing how to adjust the gnomon empirically by means of the given length of shadow on a particular day. This tract is reprinted in Schneider, as doubtless by other writers. There is no doubt that Aldus judges rightly in maintaining the hours of the day according to Palladius are always twelve, and these make up the interval between sunrise and sunset. Thus in the month of June the length of the shadow is given in feet as follows:

<i>Horae i & xi</i>	.	.	.	22
ii	x	.	.	12
iii	ix	.	.	8
iv	iix	.	.	5
v	vii	.	.	3
vi		.	.	2

But whether this day is composed of twelve *equal* civil hours is not mentioned; nor, as Sir G. C. Lewis remarked in his treatise

¹ See Note 3 for this earliest form of reaping-machine.

on the Astronomy of the Ancients, is it stated what is the length of the pointer which casts the shadow. Moreover, we are not informed on what particular day (whether at the beginning, middle, or end of any month) the measurement for that month is made; and we shall see by reference to the data of Palladius that his measurements certainly never run nearer than to the nearest integral number of feet; nor are we told what kind of a sun-dial is employed. We will first transcribe Palladius' 12 tables into one, observing that it is only necessary to note the shadows for half the day, since the lengths repeat in inverse order; and for half a year, since he makes the months also coincide two and two, January with December, February with November, and so on.

TABLE I.

<i>Horae</i>	<i>January</i>	<i>February</i>	<i>March</i>	<i>April</i>	<i>May</i>	<i>June</i>
i & xi	xxix pedes	xxvii	xxv	xxiii	xxii	xxii
ii x	xix	xvii	xv	xiiii	xiii	xii
iii ix	xv	xiii	xi	x	ix	viii
iv iix	xii	x	vii	vii	vi	v
v vii	x	viii	vi	v	iiii	iii
vi	ix	vii	v	iiii	iii	ii

Now, to begin with, with regard to the apparatus by which the shadow is cast, we may say that if it is a sun-dial it is not a vertical south dial, for the shadow is cast whenever the sun is above the horizon. We infer, therefore, either that it is a horizontal dial, or that Palladius is even more elementary and is in fact measuring what is practically the shadow of a vertical stick.

On the hypothesis of a horizontal dial the shadow at midday is given by

$$\frac{\cos \delta}{\cos \phi - \delta} \times \text{length of style},$$

where δ is the sun's northerly declination and ϕ the latitude. Thus the ratio of shadows at periods of the year six months apart is $\cos \phi - \delta : \cos \phi + \delta$. Taking figures from our table we have

$$\frac{1 + \tan \phi \cdot \tan \delta}{1 - \tan \phi \cdot \tan \delta} = \frac{9}{2}$$

therefore

$$\tan \phi = \frac{7}{11} \cot \delta$$

δ being the sun's declination somewhere between December 1 and January 31. Now, if we give δ its greatest value we have

$$\delta = 23^\circ 20' \text{ and } \phi = 55^\circ 52'.$$

If we had supposed observations made at the beginning of December, or when $\delta = 22^\circ$, we have

$$\phi = 57^\circ 36'.$$

It is evident that these latitudes are a great deal too far north to be admissible. Moreover, if we take a particular latitude such as Rome (42° N) and calculate the shadows for the end of the first week of each month, we shall find it difficult to harmonize our results with the given data; thus a four-foot style would give mid-day shadows

$$8.4 \quad 7.1 \quad 5.6 \quad 4.8 \quad 4.1 \quad 3.9$$

and the divergence is as great when we take for instance latitude 47° , that is, if we go five degrees north of Rome, where we get

$$9.3 \quad 8.2 \quad 6.4 \quad 6.1 \quad 4.4 \quad 4$$

with a style four feet in length. And if we imagine the author to have carried a sun-dial adjusted at Rome five degrees north, the results when corrected are even more divergent. A reference to Table III shows how impossible is the hypothesis of a horizontal dial. So that we can not even assume that our author has imitated the foolish parade of the Romans when they brought a valuable sun-dial from Syracuse and fixed it up without correction for change of latitude, in the Comitium.¹

It seems that we must abandon this hypothesis and seek a simpler one; and here we are helped by the remembrance that the earliest form of the sun-dial is not one with an elevated gnomon starting from the centre of the dial, but is composed of two strips of metal or wood, one horizontal and in the north and south line of the dial, and the other at right angles to it and perpendicular to the plane of the dial and of a proper height to adjust the instrument to the latitude of the place.

It is, therefore, in the highest degree likely that Palladius has employed a dial of this kind, and he may even have measured his shadows from the foot of the upright pointer and not from the middle of the plate. Our figures then give us

$$\begin{array}{ll} \text{from June} & x \cdot \tan \overline{\phi - \omega} = 2 \\ \text{and December} & x \cdot \tan \overline{\phi + \omega} = 9 \end{array}$$

¹ Bunsen. Hippolytus I 430.

where x is the length of the vertical style, ϕ is the latitude, and ω the obliquity of the ecliptic. This leads us to the conclusion that

$$x^2 - 7x \cot 2\omega + 18 = 0,$$

which is certainly an impossible equation, if ω have the value ordinarily ascribed to it. Either, therefore, the measurements are incorrect, or they are not made at the solstices, or else we shall be forced to abandon the hypothesis of a vertical style as well as the previous one. We observe, however, that at the corresponding times of the winter and summer the ratio of the shadows is $\tan(\phi + \delta) : \tan(\phi - \delta)$, a proportion which for various values of ϕ ranges from ∞ to ∞ as ϕ changes from δ to $\frac{\pi}{2} - \delta$, and has therefore a minimum value between those limits, viz. when $\phi = \frac{\pi}{4}$, in this case the ratio is $\tan^2\left(\frac{\pi}{4} + \delta\right)$; which shows us that at the solstices the winter shadow at midday is $6\frac{1}{2}$ times the summer one in latitude 45° , and a greater proportion in every other latitude; and the winter shadow when the sun's declination is 20° is $4\frac{1}{2}$ times the summer shadow in latitude 45° , and greater in every other latitude. Now $4\frac{1}{2}$ is the proportion of winter and summer shadows, according to our author.

We cannot then be very far from latitude 45° ; and, assuming this latitude for the moment, we have

$$\begin{aligned} x \cdot \tan(\phi - \omega) &= 2 \\ x \cdot \tan(\phi + \omega) &= 9 \end{aligned}$$

equations which we know to be somewhat inconsistent.

$$\begin{array}{ll} \text{The first gives us} & x = 4.8 \\ \text{the second} & x = 5.4 \end{array}$$

and we may therefore infer that the style by which the shadow was cast was 5 feet in length. Assuming therefore a vertical staff 5 feet in length, we construct Table II, which gives us the actual shadows for four principal latitudes for every week of the first six months of the year. A comparison of our table with the data of Palladius confirms our supposition that we are not far from latitude 45° . Athens is evidently a great deal too far south.

Now, before we go further, we must remark that of all the results given by Palladius the most correct will probably be those given for June, because the weather is probably clear, and, the sun scarcely

varying a degree in declination during the whole month, we may therefore expect the shadows to be accurately measured. On the other hand winter measurements are least trustworthy, for the opposite reasons. Moreover, of measurements made on any given day, the first is likely to be very sensibly less than the theoretical value, because the sun is raised by refraction, especially when on the horizon, and consequently casts a shorter shadow than it ought. Another perceptible error in the opposite direction may be expected if the hours are marked by a clepsydra adjusted to the month or day; the water runs out too fast at first, and the early hours are a little short perhaps;¹ this makes the shadows of Palladius somewhat longer than they ought to be, in the beginning of the day; but I do not suppose that this error will compensate the one introduced by refraction. A difference of a degree in altitude makes a difference of 3 feet nearly in the shadow, when the altitude is 10°.

So far our table has only served to assure us that we were right in putting five feet for the length of the style, and that the latitude is not far from 45°; but we are scarcely able to decide with certainty between 42°, 45°, and 47°. We therefore proceed to calculate the shadows for every hour of the civil day, at the time of the equinox, for the latitudes in question. The results are given in Table IV; and bearing in mind the cautions given a little while ago with regard to the longest shadows, the comparison *is decisive in favor of latitude 45°*; but latitude 47° is better than that of 42°; and, as we have pointed out, these are the results upon which we can best rely, being made at midsummer.

Lastly, we have calculated, from the assumption that the sun is in the equator, the lengths of the shadows for the whole of the civil day at the equinox. It is not perfectly easy to decide at what date the sun, according to Palladius, passes the equinox; assuming it to be somewhere in March or April, we see by reference to Table V that the judgment is against the latitude of Rome, and in favor of one even more northerly than 45°.

Upon the whole we conclude that the measurements given by Palladius refer to a latitude at least as high as 45°; *i. e.* to a country very much further north than Sardinia, Naples, or Rome; and

¹"The supposed determination of an instant by means of clepsydras is likewise futile; for the contents of the jar will not flow out in the same time [? at the same rate] when it is full as when it is half empty."—Hippolytus, Philosophumena IV 5.

in fact it can only be Gaul, perhaps as far north as Aremorica, the province to which Exsuperantius, who must now be regarded as the father of our Palladius, is referred by Rutilius in his Itinerary. There are especial reasons for a reference to latitude 45° . We may show that a table of shadows must actually have been in existence for that latitude.

A reference to Vitruvius, *de Architectura* XI, c. iv, gives us the following information on the subject of sun-dials: "Ea autem sunt divina mente comparata habentque admirationem magnam considerantibus, quod umbra gnomonis aequinoctialis alia magnitudine est Athenis, alia Alexandriae, alia Romae, non eadem Placentiae ceterisque orbis terrarum locis. Itaque longe aliter distant descriptiones horologiorum locorum mutationibus." Critics have been puzzled to explain the force of the reference to Placentia; the interpretation is that the 45th parallel of latitude was actually over the city, or as nearly as could be determined by persons of limited ability and apparatus. It was especially easy to set up a sun-dial in this latitude, the gnomon being immediately constructed by means of a right angled isosceles triangle.

We may, I think, conclude that the measurements of Palladius are the shadows of a vertical rod 5 feet in length, in latitude 45° , or a little to the north of it; that the treatise is therefore properly ascribed to Gaul, Palladius fairly identified as the son of Exsuperantius to whom St. Jerome wrote one of his epistles, and that it is not true, as Weiss and other critics have affirmed, that the reference to Gaul is founded merely upon a similarity of name.

It is a delicate matter to establish very positive conclusions upon very incomplete data, but I think we have established our conclusion. As Aldus observes, a complete series of observations *by experiment* would require a large book and a long life. "Observandi forent dies sereni multorum annorum donec omnes describerentur. Quod quia laboriosum est, et longi taedii plenum, nec Palladius fecit, nec aliis quisquam, nec forte erit unquam qui faciat. Sed de his haec satis. Tu vero, lector carissime, vale et me ama."

TABLE I.—*Table of Shadows from Palladius, De Agriculturâ.*

<i>Horae</i>	<i>January</i>	<i>February</i>	<i>March</i>	<i>April</i>	<i>May</i>	<i>June</i>
i et xi	xxix	pedes xxvii	xxv	xxiii	xxiii	xxii
ii et x	xix	xvii	xv	xiii	xiii	xii
iii et ix	xv	xiii	xi	x	ix	viii
iv et iix	xii	x	viii	vii	vi	v
v et vii	x	viii	vi	v	iv	iii
vi	ix	vii	v	iv	iii	ii

TABLE II.—*Table showing the lengths of the actual shadows at midday for a vertical stick of length either 1 foot or 5 feet, the latitudes being noted on the margin, and the sun's declination for the day being taken to the nearest degree.*

Latitude	January				February				March			
	1	8	15	22	1	8	15	22	1	8	15	22
38° { Athens 37° 58' }	1.80	1.73	1.66	1.60	1.42	1.32	1.23	1.11	1.00	.93	.83	.78
	9.00	8.6	8.3	8.0	7.1	6.6	6.1	5.5	5.0	4.6	4.1	3.9
	<i>Average</i>		8.2				6.0				4.2	
42° { Rome 41° 53' }	2.14	2.05	1.96	1.73	1.66	1.53	1.42	1.27	1.17	1.07	.96	.90
	10.7	10.2	9.8	8.6	8.3	7.6	7.1	6.3	5.8	5.3	4.8	4.5
	<i>Average</i>		9.5				7.0				4.8	
45° Placentia	2.47	2.35	2.24	2.14	1.88	1.73	1.60	1.42	1.30	1.19	1.07	1.00
	12.3	11.7	11.2	10.7	9.4	8.6	8.0	7.1	6.5	5.9	5.3	5.0
	<i>Average</i>		11.0				7.9				5.4	
47° { Poitiers 46° 50' }	2.74	2.60	2.47	2.35	2.05	1.88	1.73	1.53	1.40	1.27	1.15	1.07
	13.7	13.0	12.3	11.9	10.1	9.4	8.6	7.5	7.0	6.3	5.6	5.3
	<i>Average</i>		12.2				8.5				5.7	
Latitude	April				May				June			
	1	8	15	22	1	8	15	22	1	8	15	22
38° { Athens 37° 58' }	.66	.60	.53	.48	.42	.38	.34	.32	.28	..	..	..
	3.3	3.0	2.6	2.4	2.1	1.9	1.7	1.6	1.4	..	..	1.3
	<i>Average</i>		2.7				1.7				1.3	
42° { Rome 41° 53' }	.76	.70	.62	.57	.50	.46	.42	.38	.36	..	..	..
	3.8	3.5	3.1	2.8	2.5	2.3	2.1	1.9	1.8	..	..	1.7
	<i>Average</i>		3.1				2.1				1.7	
45° Placentia	.88	.78	.70	.64	.57	.53	.48	.46	.42	..	..	..
	4.4	3.9	3.5	3.2	2.8	2.6	2.4	2.3	2.1	..	..	2.0
	<i>Average</i>		3.5				2.4				2.0	
47° { Poitiers 46° 50' }	.91	.83	.75	.70	.62	.57	.53	.50	.46	..	..	..
	4.5	4.1	3.7	3.5	3.1	2.8	2.6	2.5	2.3	..	..	2.2
	<i>Average</i>		3.7				2.6				2.2	

TABLE III.—Table correcting the previous results so as to give measurements from the centre of the dial-plate, the elevated pointer being five feet, and the shadows cast at midday.

This gives us, in fact, the actual shadows in a sun-dial. We add for Athens $5 \cdot \cot 38^\circ = 6.3$; for Rome $5 \cdot \cot 42^\circ = 5.5$; for Placentia 5; for Poitiers $5 \cdot \cot 47^\circ = 4.6$.

	January	February	March	April	May	June
Athens	15.3 to 13.1	13.1 to 11.3	11.3 to 9.6	9.6 to 8.4	8.4 to 7.7	7.7 to 7.6
Average	14.5	12.3	10.5	9.0	8.0	7.6
Rome	16.2 to 13.8	13.8 to 11.3	11.3 to 9.3	9.3 to 8	8.0 to 7.3	7.3 to 7.2
Average	15.0	12.5	10.3	8.6	7.6	7.2
Placentia	17.3 to 14.4	14.4 to 11.5	11.5 to 9.4	9.4 to 7.8	7.8 to 7.1	7.1 to 7.0
Average	14.7	12.9	10.4	8.5	7.4	7.0

We can see at a glance, from the proportion of the shadows in the table, that the shadows are not those of a sun-dial.

TABLE IV.—Lengths of shadows at the summer solstice for the six hours of the day; with a five-foot style.

	Hours i	ii	iii	iv	v	vi
According to Palladius	xxii	xii	viii	v	iii	ii
In latitude 42°	22.2	10.1	5.9	3.2	2.4	1.7
In latitude 45°	22.7	10.0	8.6	5.3	2.5	2.0
In latitude 47°	23.8	10.7	6.9	4.0	2.6	2.2

Observing that on account of the irregular run of the clepsydra the hours are most accurately measured in the middle of the run; and that the elevation of the sun by refraction diminishes the shadow as calculated theoretically, which makes a very sensible difference when the sun is on the horizon; we conclude in favor of latitude 45° , but 47° is better than 42° .

TABLE V.—Showing the shadows for every hour of the civil (actual) day, at the equinox, for three principal latitudes.

	Horae i	ii	iii	iv	v	vi
Palladius, results between	25 { 23 {	15 { 14 {	11 { 10 {	8 { 7 {	6 { 5 {	
						5 } pedes
Latitude 42°	25.4	12.5	8.0	5.9	4.8	4.5
Latitude 45°	26.8	13.2	8.6	6.4	5.3	5.0
Latitude 47°	27.8	13.7	9.0	6.8	5.7	5.3

*Note 1: On Exsuperantius.*¹ He was born at Poitiers in the 4th century . . . and was a relative and friend of Rutilius, who speaks in his praise in the first book of his Itinerary. He had applied himself particularly to the study of Jurisprudence, and it is believed that he had composed treatises on that science. One of his brothers, Quintilius or Quintilianus, had retired to the solitude of Bethlehem, where he lived under the direction of Jerome. At his direction the holy doctor wrote to Exsuperantius a letter,² which has been preserved, and in which he exhorts him to follow the example of his brother. Exsuperantius, however, would not renounce the advantages which the world seemed to offer him. Nominated to the important office of prefect of the Praetorium among the Gauls, he occupied himself in re-establishing order and police in the *Armorican* provinces ; he succeeded in expelling the Goths, and in quieting disturbances occasioned by the levy of new taxes. At last he came to Arles, believing that his presence would suffice to reduce to order the revolted legions ; but as soon as he appeared amongst the mutinous soldiers, they surrounded him and stabbed him to death. The death of Exsuperantius happened in 424, under the reign of the weak John, who did not even order search to be made for the assassins.

Note 2: On Rutilius.

Tum discessurus, studiis urbique remitto
 Palladium, generis spemque decusque mei,
 Facundus juvenis Gallorum nuper ab arvis
 Missus Romani discere jura fori.
 Ille meae secum dulcissima vincula curae,
 Filius adjectu, stirpe propinquus habet.
 Cujus Aremoricas pater Exsuperantius oras
 Nunc postflminium pacis amare docet.

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Note 3: On the French Reaping Machine of the 5th century. It is, to say the least, somewhat astonishing to find an early account of a reaping machine used in the level parts of Gaul, not very dissimilar from those employed in the great West to-day. "Pars Galliarum planior hoc compendio utitur ad metendum, et praeter hominum labores, unius bovis opera spatium totius messis absunit. Fit itaque vehiculum, quod duabus rotis brevibus fertur. Hujus

¹ Weiss in Michaud, Biographie Universelle.

² It is Ep. CXLV in Migne's Patrologia.

quadrata superficies tabulis munitur, quae forinsecus reclines in summo reddant spatia largiora, ab ejus fronte carpenti brevior est altitudo tabularum. Ibi denticuli plurimi ac rari ad spicarum mensuram constituantur in ordinem, ad superiorem parte recurvi a tergo vero ejusdem vehiculi duo brevissimi temones figurantur velut amites basternarum. Ibi bos capite in vehiculum verso jugo aptatur et vinculis, mansuetus sane, qui non modum compulsoris excebat. Hic ubi vehiculum per messes coepit impellare, omnis spica in carpentum denticulis comprehensa cumulatur, abruptis ac relictis paleis; altitudinem vel humilitatem plerumque bubulco moderante qui sequitur; et ita per paucos itus et redditus brevi horarum spatio tota messis impletur. Hoc campestribus locis vel aequalibus utile est et iis quibus necessaria palea non habetur."

J. RENDEL HARRIS.

III.—ON SOME POINTS OF USAGE IN ENGLISH.

Already in the opening pages of the instructive remarks on the Revised New Testament which Professor Short is contributing to this Journal,¹ even a rapid glance suffices to discern, where he adverts to usage in modern and in older English, a sprinkling of assertions demonstrably open to question.

Assuredly, it ought not to be, that, day by day, the fact is still practically treated as though it were not a fact, that English philology is, as yet, very far from maturity.² For a long time to come, it must be the case, just as it now is, that any industrious reader of our literature can discover things previously unrecorded, or slighted, by lexicographers, glossarists, and grammarians, of a character to modify, if not to invalidate, positions supposed to be definitively established. In these circumstances, wariness and diffidence will never be out of place. Just in proportion to their prevalence, there would seldom be occasion to comment on hasty pronouncements, and the criticism of philologists would be dispensed from the necessity of a polemic attitude.

According to Professor Short, "the verb in the singular after a compound subject" "is rare" in "modern English"; and he seems to be dissatisfied with Dr. Liddon for writing: "All this and much else *appears* to forbid," etc. As he draws no distinctions, would he scruple an expression on the type of "milk and water *is* a harmless beverage"? Referring to Milton's "where *flows* Ganges and Indus," Walter Savage Landor³ observes: "The small fry will carp at this, which is often an elegance, but oftener in Greek than in Latin, in Latin than in French, in French than in English." Let Landor say what he may, there is, nevertheless, to what he would have called the degenerate ears of later days, something inevitably grating in the locution which he adduces;⁴ and an imitation of it

¹ *Vide supra*, pp. 141–169.

² Witness, for instance, Mr. Hensleigh Wedgwood's "Contested Etymologies in the Dictionary of the Rev. W. W. Skeat," just published.

³ *Works and Life* (1876), Vol. IV, p. 460.

⁴ Still worse is the following, in which one would, in an ordinary case, presume a typographical error: "Scythia and Tartary *has*, each, its characteristic breed of horse." Professor F. W. Newman, *Miscellanies* (1869), p. 201.

As a whole, Professor Newman's English is arrestingly eccentric, above all for its independence of idiom.

would no longer be tolerated.⁵ At the same time, since countless

⁵ Indeed, even in the days of English much quainter than Milton's, "flows Ganges and Indus," in which the compound subject consists of proper names, would have been objected to, though precedents for "flows milk and honey," and for "flows waters," were long extremely common. Somewhat less common, however, in older English,—dialectal excepted,—are expressions like "waters flows," where the verb is not protactic. Specimens of them,—which might be headed with quotations from Chaucer, from writings attributed to Wyclif, and from other sources,—are subjoined :

"I kepe the stremys and the waters that rennys to Paradice." Anon. (fifteenth century), in *Letters of Queen Margaret of Anjou*, etc., p. 166 (Camden Society, 1863).

"And there, thorugh mysgovernaunce, the carikes, with alle the good therinne, was brent." Anon., *A Chronicle of London*, etc. (1442-1483), p. 89 (1827).

"And thes dedys of armys was for lyffe and deth." William Gregory (? about 1469?), in *Historical Collections*, etc., p. 236 (Camden Society, 1876).

"Lyke a spere, it perced the hertes of all her true seruauntes that was about her." Bp. Fisher (1509), *English Works*, Part I (1876), p. 300.

"And she sayth playnly that the Duk and the lords is togethers, and comyth forth of Edinburgh this same day." Sir William Bulmer (1523) in Sir Henry Ellis's *Original Letters*, etc., Third Series (1846), Vol. I, p. 328.

"Other capiteins has"; "the warkes is done"; "the souleours forsaid has advertised me." Thomas, Lord Dacre (1523 and 1524), in *State Papers*, etc., Vol. IV (1836), pp. 65, 66, 75.

"Thadventures that was fallen"; "his wordes was nat byleved"; "all these wordes that was bytwene . . . was come," etc.; "many dedes of armes there was done"; "xl. thousande frankes was gadered"; "his revenewes was therby augmented"; "their wylles was to have him kynge." Lord Berners, *Froissart* (1523-1525), Vol. I, pp. 15, 81, 109, 202, 729; Vol. II, pp. 635, 752 (ed. 1812).

"His fortunes is base." *Id.*, *The Golden Boke*, etc. (1534), sig. Aa 3 r. (ed. 1546).

"Many great conflyctes was betwene them." John Rastell, *The Pastyme of People* (1529), p. 172 (ed. 1811).

"For the world loveth all that are of the world, and hateth all things that is contrary to it." "My first-fruits, reparations, and solutions of my debts amounts to seventeen hundred pounds." "I dare say a thousand was the fewest that with joy left their houses and lives here." Bp. Hugh Latimer (1530, 1538, and 1555), *Sermons and Remains* (1845), pp. 412, 437.

"Few men shotes"; "horses . . . lettes and troubles one another"; "they stresses not a shaft much"; "two maner of arrowe heades, sayeth Pollux, was used in olde tyme." Roger Ascham, *Toxophilus* (1545), pp. 48, 89, 126, 135 (ed. 1868).

"Some sighes out their wordes. Some singes their sentences. Some laughes altogether, when thei speake to any body. Some gruntes like a hogge. Some cackles like a henne or a jacke dawe. Some speakes as though thei should tell a tale in their sleve. Some cries out so loude that thei would make a mannes eares ake to heare them." Sir Thomas Wilson, *The Arte of Rhetorike* (1553),

quotations from reputable authors of the last hundred years, generically parallel, for their concord, to that for which Dr. Liddon is cited, are, as every observant philologist well knows, producible, is Professor Short warranted in designating their grammar as "rare"? For the subjoined fifty-seven testimonies adverse to that view I have made, by the by, no special quest whatever:

"Less and less *is* done." Dr. Johnson (1783), in *Letters to and from, etc.* (1788), Vol. II, p. 278.

"The difficulty and controversy now *was*, to determine to which of these four classes each word belonged." Rev. John Horne Tooke, *Diversions of Purley*, Part I (1786), p. 21 (ed. 1798).

"All this stratagem and mystery *looks* very much like some scheme contrived by love." Mrs. Elizabeth Inchbald, *Child of Nature* (1788), Act I, Scene I.

fol. 112 (ed. 1567). The first edition, also, that of 1553, has been consulted, for the greater certainty.

"Yet *was* the charges the king's, the which *was* no small sums of money." George Cavendish, *Life of Cardinal Wolsey* (about 1560), Vol. I, p. 141 (Mr. Singer's edition).

"White teeth *is* a good sight in a woman." Sir Thomas Hoby, *The Courtyer* (1561), sig. F 2 r. (ed. 1577).

"Great consultations *was* had upon this request." Rev. Edmund Campian, *A Historie of Ireland* (1571), p. 44 (ed. 1809).

"Yet their temple, sacrifices, ceremonies, law, and doctrine, *was* good." Rev. Dr. William Fulke, *Stapleton's Fortress Overthrown*, etc. (1580), p. 38 (ed. 1848, Parker Society).

"Those actes, . . . the which long since *is* past"; "those matters of the Indyas, the which *was* done"; "the Indias *is* frequented by the Portingales"; "those battayles that *was* done"; "neyther yet kinges nor captaines of none of all these nations *was* so equall in force"; "the charges that *is* daylye done there." Nicholas Lichefield, *The First Booke of the Historie*, etc. (1582), Prologue. Shakespeare, also, might be quoted largely here, if space allowed.

In the extract from Sir Thomas Wilson, "some," as the contexts show, is not for "some one," a use which, though not seen in his pages, is found in Lord Bacon and in the Bible. It looks as though we there had a colloquialism. Compare "you *was*," which, in an informal style, was not beneath Dr. Hawkesworth, Horace Walpole, Cowper, and Lord Byron.

As to the passage from Sir Thomas Hoby, I am not unaware that its verb may be regarded as owing its number to the attraction of "sight." Let it be taken, then, as furnishing a sample of an interesting outworn idiom with which I am not now specially concerned. Older books abound with like constructions. Fulke (*ut supra*) has, at p. 25: "Idleness and vain ceremonies *is* the exercise of popish monks."

The northern third person plural of most verbs once ended in *-s*; and a survival of that ending may, possibly, be traceable in Latimer's, Ascham's, Sir Thomas Wilson's, and Shakespeare's plurals, *amounts*, *troubles*, *cries*, *poisons*, etc. But *is*, *has* and *was*, as plurals, and Ascham's "you *lettes*" (*Toxophilus, ut supra*, p. 120), have no sure warrant in early English.

"All I had heard of his eloquence, and all I had conceived of his great abilities, *was* more than answered by his performance." Madame D'Arblay (1788), *Diary and Letters*, Vol. IV, p. 95 (ed. 1842, etc.).

"The engagement and pact of society, which generally *goes* by the name of the constitution, *forbids* such invasion and such surrender." "The unbought grace of life, the cheap defence of nations, the nurse of manly sentiment and heroic enterprise, *is* gone." "Already there *appears* a poverty of conception, a coarseness and vulgarity, in all the proceedings," etc. Edmund Burke, *Reflections*, etc. (1790), pp. 28, 113, 118.

"My own disappointment and loss in her *is* very great." Miss Jane Austen, *Northanger Abbey* (1798), p. 171 (ed. 1866).

"I wish to be buried with as little expence and ceremony as *is* consistent with decorum and a regard to general opinion." Rev. Gilbert Wakefield (1799-1801), in *Memoirs*, etc. (1804), Vol. II, p. 306*.

"The plan and execution of the 'Friend' *is* so utterly unsuited to the public taste as to preclude all rational hopes of its success." S. T. Coleridge (1809), in the *Life and Correspondence of Robert Southey*, Vol. III, p. 259.

"The heat and exasperation of battle *was* suspended." Robert Southey, *Edinburgh Annual Register for 1809*, Part I, p. 725 (1811).

"The bread and milk *reminds* me of an anecdote connected with the fashion of those days." *Id.* (1821), in *Life and Correspondence*, Vol. I, p. 52.

"In reality, flesh and blood *is* not equal to such wear and tear as *is* exacted from an English minister in these times." *Id.* (1822), in *Selections from the Letters*, etc., Vol. III, p. 329.

"My great doubt and difficulty, at present, *is* as to the possibility and the manner of reconciling Gieseiler with Schleiermacher." Bp. Connop Thirlwall (1823), *Letters* (1881), Vol. I, p. 71.

"The applause and admiration excited by certain achievements and accomplishments *infects* us with desire." William Godwin, *Thoughts on Man*, etc. (1831), p. 57.

"In history, the hero and the politician *dwindle* into a vain and feeble tyrant." Lord Macaulay (1832), *Miscellaneous Writings*, Vol. II, p. 89 (ed. 1860).

"Both what was good and what was bad in Goldsmith's character *was*, to his associates, a perfect security that he would never commit such villainy." *Id.* (1856), *ibid.*, Vol. II, p. 258.

"On the one side *is* health, leisure, peace of mind, the search after truth, and all the enjoyments of friendship and conversation.⁶ On the other side *is* almost certain ruin to the constitution, constant labour, constant anxiety." *Id.* (1835), in *Life and Letters*, etc., Vol. I, p. 442 (ed. 1876).

"Everywhere else *was* the thunder, and the fire running along the ground,—a very grievous storm,—a storm such as there was none like it since man was on the earth."⁷ *Id.* (1852), *Speeches*, p. 507 (ed. 1854).

⁶ I remark on this sentence in note 9 *infra*.

⁷ This imitation of old-fashioned style, with its "such as there was none like it," is not remarkably felicitous. Again, however our forefathers wrote, we should do well so to write as not to suggest the question, when man ceased to be on the earth.

In the *Selection from the Correspondence of the late Macvey Napier, Esq.*, Lord Macaulay is represented, at p. 289, as having written, in 1839: "Everything and everybody *is languid*."

From Lord Macaulay's *History* I transcribe as follows:

"The poetry and eloquence of the Augustan age *was assiduously* studied in the Anglo-Saxon monasteries." Chap. I.

"To fierce spirits, . . . it seemed, that to waylay and murder the king and his brother *was the shortest and surest way*," etc. Chap. II.

"The brilliancy of the shops and the luxury of the private dwellings *far surpasses* anything that England could then show." Chap. III.

"The difficulty and expense of conveying large packets from place to place *was so great*," etc. Chap. III.

"Every sight and sound *was* thought to indicate the approach of pursuers." Chap. V.

"To sit near him at the theatre, and to hear his criticisms on a new play, *was* regarded as a privilege." Chap. VI.

"In the neighbourhood of the little cluster of villages *was* some copsewood and some pasture-land." Chap. XVIII.

"The equipping and manning of the ships *was urged* forward with vigour." Chap. XVIII.

"There *was* far less industry and energy, among the labouring classes, than in England." Chap. XXIII.

The next quotations are from Mr. W. E. Gladstone's *Gleanings of Past Years*:

"That great intellect and heart *has* left upon record," etc. "Anything and everything *suggests* itself to him." "Great plainness and adequate freedom of speech *is* to be used." "Such as the character and efficacy of law *is* now, such, they are apt to assume, *it always must have been*." "Science, experience, . . . have reached a bulk and maturity which *displaces* religion from," etc. Vol. II, p. 308; Vol. III, p. 220; Vol. V, p. 61; Vol. VI, pp. 185, 212. These passages are dated 1876, 1878, 1843, 1875, and 1875, respectively.

"The analogy and contrast between moral and spiritual knowledge *deserves* remark." "Physical ease and comfort *is* the most valuable thing," etc. Professor F. W. Newman, *The Soul*, etc. (1849), Preface, p. viii, and p. 43.

"I found . . . that beauty and effect *was*, sometimes, largely lost," etc. *Id.*, *The Iliad of Homer*, etc. (1856), Preface, p. vii.

"Their skill, beauty, and correctness *is* immensely superior." *Id.*, *The Text of the Iguvine Inscriptions*, etc. (1864), Preface, p. vi.

"But the savage . . . adopts that mode of living which the climate and land *suggests* as easiest." *Id.*, *Miscellanies* (1869), p. 158.

"How much strength and courage *was* derived from the ministries of religion," etc. Bp. Christopher Wordsworth (1854), *Miscellanies*, etc. (1879), Vol. I, p. 254.

"The question and answer . . . *applies*," etc. "This question and answer *restrains*," etc. "This question and answer *deprives*," etc. Sir James Fitzjames Stephen, *Defence*, etc. (1862), pp. 51, 56, 59.

"Great natural energy and generosity *has* been manifested," etc. "The nature and origin of man *has* been so often fixed and unfixed," etc. Cardinal Manning, in *Essays on Religion and Literature*, First Series (1865), pp. 36, 64.

"But, in fearful truth, the presence and power of him *is here*." Mr. John Ruskin, *Time and Tide*, etc. (1867), p. 58 (ed. 1872).

"But the administrative government and real substance of power *was*, at all times, in the hands of the oligarchy." Mr. James Bryce, in *Essays on Reform* (1867), p. 255.

"As much power and labour *has* gone," etc. Mr. A. C. Swinburne, *William Blake* (1868), p. 109.

"For the former the continual presence and supervision of the maître d'étude *leaves* no place." Mr. Matthew Arnold, *Schools and Universities on the Continent* (1868), p. 80.

"With reference to it there *is* generated a voluntary activity and determination," etc. Professor A. Bain, in James Mill's *Analysis*, etc. (ed. 1869), Vol. I, p. 396.

"Nor *is* the pathetic and the tragic exhibited under less multiplicity of forms." Rev. J. S. Brewer (1871), *English Studies*, p. 260 (1881).

"It *was* such peace and freedom as *was* consistent with the position of an outlying province." Mr. E. A. Freeman, *Historical and Architectural Sketches* (1876), p. 226.

"From Greece *comes* art and literature, and, in a manner, law and freedom." *Id., Historical Essays*, Second Series (1879), p. 234.

"In America, the presence of English law, and all that *comes* of the presence of English law, *is* something thoroughly natural and native." *Id.*, in *Longman's Magazine*, No. 1 (1882), pp. 81, 82.

Now-a-days, neither plural substantives and pronouns, nor a plural and a singular, may be nominative to a verb, protatric or hypotactic, in the singular; and herein, alone, good usage restricts us, absolutely, from the freedom, as to concord, in which our fore-fathers, "more or less remote, allowed themselves."⁸ That considera-

⁸ They rather seldom, I think, wrote as follows: "And there *was* taken the erle of Dene, Sr Olyver Claykyn, and manye othere." Anon., *A Chronicle of London*, etc. (1442-1483?), p. 67 (1827). And similarly at pp. 86, 136, 138, 139, 141, 144, etc.

This is like Milton's "flows Ganges and Indus." Compare *St. Matthew*, XXVII, 56.

At p. 130 of the *Chronicle* just quoted we read: "And, in this yere, come tidynges unto the kyng, that Gascoigne and Gyan *was* lost."

It is not very often, I should say, that two or more proper names are found constructed in like manner.

⁹ Most of what, gauged by later usage, are concordial licences of theirs, have, from heedlessness, found their way, here and there, into the pages of moderns.

"All proportions, every arrangement of quantity, *is* alike to the understanding," etc. Edmund Burke, *A Philosophical Enquiry*, etc., pp. 165, 166 (ed. 1761), or p. 141 (ed. 1792).

"And history is thus a part of that great revolution which all arts, all sciences, and all literature *is* gradually unfolding before our eyes." Rev. J. S. Brewer (n. d.), *English Studies*, p. 381 (1881).

Compare *Proverbs*, XVI, 1. The first sentence of the passage which I have already taken from the *Life and Letters of Lord Macaulay* differs from the pas-

tions of euphony, however, may be surmised to operate, now and then, consciously or unconsciously, as determinants of choice, in the matter under discussion, is not to be denied.

With regard to the archaism observable in "all the region about Jordan," Professor Short says: "This omission of the article with the name of a river has been quite obsolete for a long period." Well-known phrases like "from Tweed to Tay," or Mr. Ruskin's "by Weare and Tyne," are, of themselves, enough to disable that dictum; but conclusively irreconcilable with it, and not to be left out of account, in pronouncing on the English of England, are such current territorial names as the five and twenty, selected from upwards of thrice that number, about to be specified:

Stratford-on-Avon,¹⁰ Burgh-upon-Bain, Aston-on-Clun, Bolton-upon-Dearne, Sutton-upon-Derwent, Kingston-upon-Hull, Barrow-on-Humber, Barton-on-Irwell, Sherfield-upon-Loddon, Ashton-upon-Mersey, Newton-upon-Ouse, Ashton-on-Ribble, Frampton-upon-Severn, Shipston-on-Stour, Brompton-upon-Swale, Stockton-on-Tees, Clifton-upon-Teme, Stoke-upon-Tern, Henley-on-Thames, Burton-upon-Trent, Berwick-upon-Tweed, Newcastle-on-Tyne, Skelton-on-Ure, Staunton-upon-Wye. And compare Stanton-by-Bridge, Weston-under-Red Castle, Stanton-by-Dale, Sutton-on-Forest, Ashton-under-Hill, Kingston-upon-Railway, Grange-over-Sands, Westgate-on-Sea.

On the word of Professor Short, the pleonastic forms *from hence*, *from thence*, *from henceforth*, and *from whence* "interchange with the simple forms *hence*, *thence*, *henceforth*, and *whence*, in the best English of all periods." If the best English of our century agrees, in sanctioning those pleonasms, with the best English of bygone centuries, proofs of such agreement ought, it is submitted, to have been offered. Who is there, it may be asked, among accredited contemporary stylists, that, having committed any one of them,

sages just quoted, in that its verb is protactic. Like that sentence are *Jeremiah*, VI, 7, and *Hebrews*, IX, 4. Innumerable, in older books, are expressions similar to "There *was* ten men there." Compare *Ezekiel*, II, 10.

"There *has* been a simplicity and humility in his letters that *have* been very delightful." Archdeacon J. C. Hare (1843), in the *Life and Correspondence of Dr. Whewell*, p. 290.

This mode of writing was once very far from being unusual. For something nearly akin to it, see the *Psalms*, LXXXIX, 15, and *Proverbs*, XXX, 12.

¹⁰ Peculiarly interesting is the name of another town on the Avon, Bradford-on-Avon, a name which, within living memory, has, by an Act of Parliament, been substituted for the simple Bradford. No one in England is conscious of any archaism in "Bradford-on-Avon"; and the hiatus in "Bradford-on-the-Avon" would not have been endured.

would not, probably, on its being pointed out, admit that it had escaped him through inadvertence?

Professor Short's list of certain expressions "perhaps not to be objected *against*" can hardly be supplemented by the superannuated phrase which he substitutes for "objected *to*." A few lines after "objected *against*" occurs the quite unnecessary, however popular, innovation, "*over* four centuries ago"; and elsewhere he has the wholly disused "we will instance *in* a single writer." Nor is he at all aware that Dr. Liddon's "*it, too, grows,*" is a gross Scotticism. Yet he notifies his dislike of the still familiar "*in the way,*" for "*on the way,*" because "*it is now commonly used of an obstruction*"; as if the context would not instantly guide one to the signification it is meant to bear. Apparently, it is very exceptional to meet with a countryman of ours who has not erroneous notions and little pet crotchetts touching what is, or what ought to be, acceptable living English, and who is not ready, when they are challenged, with untenable arguments in support of them; and it is all but unavoidable that a home-staying American should judge of our language otherwise than an educated Englishman judges of it. General rectitude of linguistic discretion set aside, it has, hence, conspicuously come to pass, that, though the English Revisionists have often erred in questions of taste and expedience, their American collaborators have therein erred incomparably oftener.

The kind of repetition found in "cast *out* the mote *out of*" is, if Professor Short may be trusted, "very rare" in English. Unfortunately, it is not very rare to have to do with gratuitous certitude like that of which we here have a sample. Doubtless, the learned Professor would think it rash, in a person who had given but little attention to Latin, to make a corresponding assertion as to any idiom in that language. For the style of duplication instanced

¹¹ This epithet recurs, where Professor Short calls *whiles* "a very rare old genitive of the noun *while*, used adverbially." Since I began the present page, I have quite accidentally discovered an instance of that genitive. "That done, after some *whiles* meditation," etc. Bp. Joseph Hall (1610), *Works*, p. 347 (ed. 1648). And it would not surprise me, if I chanced upon half a dozen other instances of it within the next six months.

What have we, too, if not the old genitive of *while*, in the adverbial phrases "a *whiles*," "a great *whiles*," "one *whiles*," "the *whiles*," "in the mean *whiles*," "this mean *whiles*," "within a good *whiles*?" Instances of them all are before me; and some of them are not two centuries old. Like "a long *ways*," "a great *whiles*" still lives in vulgar English speech.

above, and a slight variation thereof, I subjoin perhaps one in ten of the references which lie heaped before me:

At . . . at. Bp. Latimer (1535), pp. 368-369 (*ut supra*). Thomas, Lord Vaux (died 1562), *The Assault of Cupid*, etc.

By . . . by. Sir Thomas Malory, *La Mort Darthur* (1469), Vol. I, p. 303, and Vol. II, p. 323 (Southey's edition).

In . . . in. Sir Thomas Malory (*ut supra*), Vol. I, p. 298. William Gregory (? about 1469?), in *Historical Collections*, etc., p. 87 (Camden Society, 1876). William Tyndale (1528), in *Doctrinal Treatises*, etc. (1848), p. 134. Bp. Latimer (1530 and 1538), pp. 300, 399 (*ut supra*). Abp. Cranmer (1537), *Miscellaneous Writings*, etc. (1846), p. 351. Sir Thomas Hoby, *The Courtyer* (1561), sig. Q 7 v. (ed. 1577). Rev. Dr. Thomas Stapleton, *A Fortresse of the Faith*, etc. (1565), fol. 79. Robert Parke, *Historie of . . . China*, etc. (1588), p. 262. Shakespeare, *Coriolanus*, Act II, Scene I; *Timon of Athens*, Act II, Scene II.

Of . . . of. Anon., *Merlin* (1450-1460?), p. 106. Henry Wyndesore (1455), in the *Paston Letters* (*ut supra*), Vol. I, p. 345. Sir Thomas Malory (*ut supra*), Vol. I, pp. 148-149, 341; Vol. II, p. 81. Lord Berners, *Froissart* (*ut supra*), Vol. I, p. 759. Bp. Latimer (1535?), p. 367 (*ut supra*). Nicholas Lichefield, *The First Booke of the Historie*, etc. (1582), fol. 84 r. Dr. Timothy Bright, *A Treatise of Melancholy* (1586), pp. 139, 166. Robert Parke (*ut supra*), p. 184. Thomas Danett, *The Historie of Philip de Commines* (1596), p. 28 (ed. 1614).

On . . . on. Shakespeare, *All's Well*, etc., Act I, Scene II.

Out . . . out. Sir Thomas Malory (*ut supra*), Vol. I, p. 45. Anon. (1568), in the *Archaeologia*, Vol. XXXI (1846), p. 463.

To . . . to. William Caxton, *Chesse* (1474), Tractate III, Chap. VIII. Sir John Paston (1477), in the *Paston Letters* (*ut supra*), Vol. III, p. 173. Lord Berners, *Froissart* (*ut supra*), Vol. I, p. 286. Shakespeare, *Troilus and Cressida*, Act V, Scene I.

With . . . with. Abp. Parker (1559), *Correspondence*, etc., p. 62 (Parker Society).

In . . . into. Anon. (1568), in the *Archaeologia*, Vol. XXXI (1846), p. 465.

Of . . . fro. Sir Thomas Malory (*ut supra*), Vol. I, p. 50.

Of . . . on. Roger Ascham, *Toxophilus* (1545), p. 110 (ed. 1868). Robert Parke (*ut supra*), p. 327.

Of . . . over. Anon. (1426), in *Letters of Queen Margaret of Anjou*, etc., p. 33 (Camden Society, 1863).

On . . . by. Samuel Pepys (1665), *Diary*, etc., Vol. III, p. 308 (ed. 1876).

Over . . . of. Sir Thomas Malory (*ut supra*), Vol. I, p. 121.

To . . . unto. *Id.*, Vol. II, p. 329. Abp. Cranmer (1533), p. 250 (*ut supra*). Rev. Dr. Thomas Stapleton, *A Fortresse*, etc. (*ut supra*), fol. 133, 135-136. Sir Thomas North, *Dial of Princes*, sig. +* 4 v. (ed. 1568).

Wherein . . . in. Sir Thomas Malory (*ut supra*), Vol. II, p. 312. Shakespeare, *As You Like It*, Act II, Scene VII.

With . . . withal. Sir Thomas Malory (*ut supra*), Vol. II, pp. 109-110. Bp. Latimer (1538), p. 406 (*ut supra*).

At variance with what Professor Short seems to imply, it may

confidently be maintained, that, in "moth and rust *doth*,"¹²—the eligibility of retaining which in the Scriptures I do not discuss,—there was not, in the age of King James's Revisers, as there is in our age, an unquestionable case of "a verb in the singular after a compound subject." The form *hath*, for instance, succeeded both *hafāð* and *hafiað*, the third person singular and the plural, respectively, of the present indicative of *habban*; and, in its character of third person plural,¹³ it was slow in passing out of vogue. That the Jacobean Revisers refused to adopt the plurals *hath, doth*,¹⁴ etc.,

¹² Tyndale, says Professor Short, is among those who "have the verb in the plural here." This, from the Professor's point of view, gives a wrong impression; for Tyndale has "rust and mothes *corrupte*."

¹³ We have not to go very far back for *-th* as, occasionally, the termination of the first and second persons plural. "We . . . alwaide have ben, *beeth*, and ever shal be," etc. Anon. (temp. Hen. V), in the *Letters of Queen Margaret*, etc. (*ut supra*), p. 22. "Ye . . . that *hathe*," etc. Robert Hungerford, Lord Moleyns (1449), in the *Paston Letters* (*ut supra*), Vol. I, p. 80. "Ze wryteth, in your letter," etc. Sir John Paston (1469), *ibid.*, Vol. II, p. 369. "Ze *hath* not sent it," etc. Margery Paston (1489), *ibid.*, Vol. III, p. 349. "Ye . . . *hath* the keyes in your warde." Anon., *Cronycle of Englonde* (1483), J 1 v. (ed. 1510). "And you have been so good, and *hath* shewed your goodness," etc. "And, sir, you be, indeed, scius artifex, and *hath* a good hand," etc. Bp. Latimer (1538 and 1539), pp. 394, 416 (*ut supra*). Also (1539), p. 422. "Ye yourself *hath* begun," etc. Bp. John Jewel (1560), *Works* (ed. 1845-1850), Vol. I, p. 66. "Yourselfe *hath* confessed the same." Bp. Edmund Geste (1568), in the *Archæologia*, Vol. XXXI (1846), p. 466. But it is possible that, with Bishop Geste, "hath" is for "has," from the influence of "-selfe." For we elsewhere find: "And I think you yourself *is* not ignorant therein." Bp. Latimer (1536), p. 373 (*ut supra*). "Your selfe *is* of fleshe." William Painter, *The Palace of Pleasure* (1575), Vol. I, p. 171 (ed. 1813); and again in Vol. I, p. 340. Similar is: "Myself *is* occupied." William Fleetwood (1577), in Sir Henry Ellis's *Original Letters*, etc., Second Series (1827), Vol. III, p. 56.

The first and second persons singular also were sometimes made to end in *-th*. Several instances are at hand of "I *hath*" in the time of Hen. VII; and I have found "I *doth*" used in the time of Hen. VIII. Bishop Geste, in the page referred to above, has "thou *hath*."

¹⁴ It would be a heavy task to indicate all the forthcoming passages which go to show that such plurals, of the third person, and preceded by plural subjects, were by no means unexampled in the Elizabethan era. Here are a few references in point:

Maketh, hath. Sir Thomas North, *Dial of Princes* (1557), fol. 49 v. and 55 v. (ed. 1568). *Lieth, hath.* George Cavendish (1558), Vol. II, p. 160 (*ut supra*). *Knoweth.* *Id.* (about 1560), *ibid.*, Vol. I, p. 130. *Goeth, doth, hath.* Abp. Parker (1559-1573), *Correspondence* (*ut supra*), pp. 62, 304, 326, 379, 438. *Hath.* Bp. John Jewel (1560), *Works* (*ut supra*), Vol. I, pp. 18, 25. *Telleth.* Dr. Henry Cole (1560), *ibid.*, Vol. I, p. 38. *Hath.* Sir Thomas Hoby, *The Courtyer* (*ut*

in contexts of various descriptions,—as in concord with pronouns or proper names,—but did not hesitate at “moth and rust *doth* corrupt,” “distress and anguish *cometh*,” “my flesh and my heart *faileth*,”¹⁵ and the like, was in harmony with the fashion of their period; and their period was one in which a slight archaism, especially if it conduced to an agreeable rhythm, was often held to constitute passably orthodox syntax. Incidentally, a curious fact, mentioned by a grammarian of the time of the Commonwealth, may account, in a measure, for the continuation of the habit of yoking two or more substantives with what have come to be, exclusively, singular verbs. Richard Hodges,¹⁶ discoursing on the customs of “our ordinary speech,” states, that, “howsoever wee

supra), sig. F 4 v. *Sayeth*. John Heywood, *Proverbs and Epigrams* (1562), p. 31 (ed. 1867). *Hath, dieth*. Rev. Dr. Thomas Stapleton, *History of the Church of Englande* (1565), fol. 14. *Hath*. Rev. Dr. William Fulke, *Stapleton's Fortress Overthrown*, etc. (*ut supra*), p. 122. *Doth (quinquies), hath* (bis). Nicholas Lichefield, *The First Booke of the Historie*, etc. (1582), Prologue. *Cometh*. *Id.*, *ibid.*, fol. 127. *Deserveth*. Reginald Scot, *The Discoverie of Witchcraft* (1584), p. 49. *Causeth*. T. B., *The French Academie* (1586), p. 53 (ed. 1589). *Doth*. Bp. Gervase Babington, *A Profitable Exposition*, etc. (1588), p. 31 (ed. 1615). *Hath, doth, cometh*. Robert Parke, *Historie of . . . China*, etc. (1588), pp. 21, 317, 327. *Doth, hath*. Shakespeare, *Merchant of Venice*, Act III, Scene II; *Winter's Tale*, Act I, Scene I.

The third person plural *doth*, employed protactically, lingered on at least to the middle of the seventeenth century.

“How *doth* our eies see,” etc. Rev. Dr. Thomas Wright, *The Passions of the Minde in Generall* (1601), p. 304 (ed. 1621).

“How *doth* grammarians hack and slash for the genitive case in *Jupiter!*” Sir Thomas Browne, *Religio Medici* (1643), p. 136 (ed. 1645).

“How ill *doth* green thoughts suit with gray *heads!*” Rev. Dr. Thomas Fuller, *A Pisgah-sight of Palestine* (ed. 1650), Books IV, V, p. 58.

¹⁵ In Isaiah, VIII, 6, the Jacobean revisers put, after “people,” “*refuseth . . . and rejoice.*” Euphony may have prompted this kind of irregularity, alike with them and with some of their precursors. Coverdale, Matthew, and Cranmer have “*refuseth . . . and put* their delite”; while the reading of the Genevan version is “*hathe refused . . . and rejoice.*” In the sixteenth century, and even later, writers at times indulged in the like of “*refuseth . . . and rejoice,*” considering one exhibition of the longer termination as enough for both verbs.

¹⁶ *The Plainest Directions for the True Writing of English*, etc. (1649), p. 60.

Elsewhere he gives *coats* and *quoteth*, *boughs* and *boweth*, *claws* and *claweth*, *choose* and *cheweth*, etc., etc., as alike in sound.

If, conversely, the terminal *-s* was heard as *-th*, Ascham's “*you lettes*” was one with the less unexpected “*you letteth*.” See the end of note 5 *supra*, and note 13.

write them thus, *leadeſt it, maketh it, noteth it*," for example, "wee say *lead's it, make's it, note's it*."

In the sphere of philology, as elsewhere, the cogency of facts being greater than that of intuitions, the foregoing evidences of usage will not, as estimated by those who value scientific truth, have been collected superfluously.

FITZEDWARD HALL.

IV.—STUDIES IN PINDARIC SYNTAX.

I.—THE CONDITIONAL SENTENCE IN PINDAR.

In this study of the conditional sentence in Pindar, no attempt will be made to discuss at length the general subject of the hypothetical period. While there is much less tendency to cast-iron rule, and the genesis of the hypothesis has been sought with a large measure of success in the original *parataxis*, yet scholars still hold, and rightly hold, to certain leading types of conditional sentences. We are still obliged to use formulae that are left over from earlier methods. Transparent form and evident etymology would relieve us of many syntactical problems, such, for instance, as torment us in the theory of the cases. And so a convincing resolution of *ει* would be a great gain for the study of the hypothetical sentence. Curtius's parallelism with 'wenn' may please the Germans, the parallelism with 'so' would seem to commend itself to German and English alike; but no one is thoroughly satisfied with these. Lange, it is true, has given the particle a happy name: *ει* is an adhibitive as *μη* is a prohibitive. 'Adhibitive' will serve, but only because it is so vague. **Αν* and **κεν* have not yet come to rest. Every now and then some one arises who finds a vital distinction between them and promulgates a yard-long definition for these perplexing particles; others are content to decline any definition and simply note how they behave in combination. But, while much remains unsettled, the lines of research are clearly marked; and it is not time wasted to ascertain the forms in which such a genius as Pindar has cast his suppositions. Those who deny or despise the literary result will at least appreciate the grammatical statistic or the historic growth.

For convenience' sake the four leading forms of the conditional will be designated as 'logical,' 'anticipatory,' 'ideal,' and 'unreal.' 'Logical' is an old designation; 'unreal' in the form *irrealis* for the condition 'contrary to fact' has become very popular among the Germans of late. The 'ideal' is sometimes called the 'potential.' The *ειν* conditional lacks a distinctive name, and I have designated it as the 'anticipatory' conditional, for reasons to be assigned below.

These four forms are crystallizations from a much larger number, just as the modern English hypothesis in its poverty exhibits a striking contrast to the floating wealth of the Shakespearean condition. In Pindar we find that the crystallization has been substantially effected, that his feeling of the conditional is essentially at one with that of the standard language. Only at one remarkable point does he show the influence of the earlier stage.

I. 1. The Logical Condition states the elements in question. It is used of that which can be brought to the standard of fact; but that standard may be for or against the truth of the postulate. All that the logical condition asserts is the inexorable connexion of the two members of the sentence. It is the favorite condition in argument. It is the favorite condition when one wishes to be or seem fair, the favorite condition when one is sure of the premiss. So it is often a *pro forma* condition, just as *si quidem* approaches *quia*; but so long as the negative continues to be *μή*, the conditional and the causal do not coincide. It is little used in epic poetry, much in dramatic, much in lyric. I have elsewhere shown how clearly it is differentiated in one of its forms, *εἰ* w. fut. ind., from *εἴναι* w. the subj.¹ In prose it is largely argumentative or semi-causal.²

2. The Logical Condition, like every other form of the conditional sentence, is particular or generic according to the character of the apodosis. Hence, when it has its apodosis³ in the present it has a double meaning, which adapts it admirably to personal argument, especially when the form *εἰ τις* is used, which may point either to a definite or to an indefinite person. But as the *εἴναι* conditional with a present indicative apodosis is regularly generic, it is not without reason that the *εἴναι* form should be preferred when distinctly generic action is to be expressed. Just as the conative element is not so distinct in the present as in the imperfect, simply because the present has the double function of a present of continuance (durative present) and a present of attainment (aoristic present), so the *εἴναι* conditional is more distinctly the generic conditional. All this is true of the crystallized language of prose. When we turn to poetry we find

¹ On *εἰ* with the fut. ind. and *εἴναι* with the subj. in the Tragic Poets (Transactions of the American Philological Association, 1876), from which paper such phrases as may suit the present purpose will be borrowed.

² In a recent edition of Xenophon's *Anabasis*, by Mr. Pretor, the editor, commenting on 4, 1, excludes the logical condition from the chief forms of the conditional proposition, which the beginner is reminded 'to master once for all.' An editor of Pindar could not afford to treat the logical condition so cavalierly.

that Homer prefers the subjunctive for generic relations, and in this respect Pindar follows him. This brings us to

II. The Anticipatory Condition, which is the name I have given to what is also called the *εάν* condition. For this form of the condition we want a word that will harmonize present and future. Anticipation is not expectation, though it is loosely used for expectation. Anticipation treats the future as if it were a present, and so we find an analogue for the protasis of this form in the imperative, which gives us a convenient paratactic representative, although it really represents historically and adequately only *ει* with the subj., not *εάν* with the subj.

The division of the anticipatory sentence into particular and generic was first made by Bäumlein (1846).¹ The anticipatory condition is particular or generic according to the character of the apodosis (see my Latin Gr. §596 note), just as any other conditional sentence. Only in Greek the present indicative is regularly generic when associated with *εάν* in the protasis, as the *praesens propheticum* is so rare as not to count. If we look at the anticipatory sentence historically we shall see that it is a fusion of at least two Homeric sets, *ει* with the subjunctive, which seems to have been the original generic, and the *ει κε, ην* set, which seems to have been an original particular. In Attic poetry *ει* with the subjunctive is occasionally found with a different tone from the older *ει* with the subjunctive, and with a decided leaning to the effect of the future indicative or, in the aorist, to the Lat. *si* with fut. perf. of the older period. In Pindar the generic *ει* with the subjunctive alone is used. Pindar does not object to *ὅς ἄν* or *ὅταν*, but there is no *ει ἄν*, nor *ει κε*.

III. The Ideal Condition seems to have been developed out of the wish, just as the anticipatory was developed out of the demand. Perhaps 'ideal' is not a very good word, but it may serve to reconcile the two notions of desire and thought. In the ideal condition there is still discernible the old optative notion. There is often a

¹ See Gr. Modi, s. 208, and School Grammar (first ed. 1856) clearly enough §§ 606, 615, 619. I owed my first acquaintance with Bäumlein's Griech. Modi to my teacher, Prof. Franz, of Berlin, who gave us, in his *Schola Graeca* (1850), the leading principles of Bäumlein's book in Greek, and, while the world has doubtless moved beyond Bäumlein, still I consider myself to owe a debt to an author who first gave an impulse to my grammatical studies. The distinction, the importance of which Bäumlein himself did not recognize fully, has passed into the school grammars such as Koch's (§ 114), and is familiar to all English-speaking Hellenists through the grammatical works of Professor Goodwin, who came to his results independently.

wish for or against. As you may use an imperative in irony, so you may use an optative of what you dread. It is the general condition of illustration. It is the condition of fancy,¹ and the word 'fancy' itself in its shifting significance may enable us to understand the Greek optative. The great riddle of the optative remains to be solved—the relation which it bears to the subjunctive, a relation so intimate that it is said to stand for the subjunctive after historical tenses. The *oratio obliqua* optative for the indicative is a comparatively late growth. It came in through the interrogative sentence, thanks to a weakening of the feeling for the moods. But the 'optative for the subjunctive' after historical tenses is familiar enough in the earliest period. Are we to accept Kühner's view and call the optative the subjunctive of the historical tenses in superficial conformity with the peculiar condition of the moods in Latin? Few would accept that now. Or are we to recognize a peculiar propriety in this shifting of demand for the future to dream for the past?²

As in the anticipatory, so in the ideal condition, we may have the classification into particular and generic. The generic optative after past tenses corresponds to the generic subjunctive after principal tenses. It was a mistake to call this optative a 'frequentative' optative, as if it were fundamentally different from the generic subjunctive. In both instances the frequentative idea lay in the notion of rule contained in the leading verb.

IV. The Unreal Condition, 'the hypothesis contrary to fact,' seems to be related to the hopeless wish, as the ideal condition to the wish pure and simple. Even Lange in his admirable treatise on *εἰ* with the optative has given himself the trouble of discriminating between the possibilities and impossibilities of the action of the optative. The only impossibility that language recognizes here is futurelessness. A wish may be madly impossible, but if it belongs to the domain of the future it is optative. Now the hopeless wish is hopeless because it is futureless; and while it may seem strange to turn the familiar statement round and derive the unreal condition from the hopeless wish rather than the hopeless wish from an incomplete unreal condition, be it remembered that the shifting of the point of view, the dramatic change of persons, is of the essence of

¹ 'Mood of the imagination' is what Lange prefers, and 'imagination' covers a great deal; but the imagination is made to work by hope and fear.

² Delbrück calls this 'Modusverschiebung,' 'eine Errungenschaft des Griechischen.' (Conj. u. Opt. s. 83.)

the situation. In the logical condition, in the anticipatory, opposing propositions are made in rapid succession. There is no reason why the wish should have been the wish of the speaker. The universe is full of wishes and wishers.

These four chief forms of the conditional sentence are all represented in Pindar, the logical, the anticipatory, the ideal, and unreal.

In Pindar the Logical Conditions far outnumber, indeed almost double, all the others put together. It is largely a mere *pro forma* condition. Occasionally generic, it almost always has in view a particular illustration of the principle involved. The *τις* of the *εἰ τις* is the victor, the victor's enemy, the victor's encomiast, and doubtless, sometimes, when it seems to us indefinite, it had a special point. This is part of the plastic character of the Pindaric style. His prepositions put before us, as the prepositions of no other Greek poet, the actual place, and so his suppositions are taken largely from concrete instances. Sometimes the reality which he has before him is so fair that it seems for a moment a dream, and he passes over into the optative (I 4 (5), 15; cf. O 6, 4), but his delight is in the sharp, clear-cut indicative. The logical condition may be generic, but it must be remembered that the generic rose out of the individual. So the generic article presents us with the model individual. So the gnomic aorist brings up a typical act of the past, which, being typical, is good for all time. Pindar goes back to the original conception. Under his generic indicative we feel the individual. The purely generic with him takes the subjunctive, but he does not use it much. True, there is moralizing enough, else Pindar were not Greek, but it is moralizing with sharp, personal application. There is a smile, a frown, a flout, under almost every *τις* of the logical condition. But it would be a mistake to narrow this form to the particular. The very delight of it is the double edge, the transparent riddle.

To specify. Of 48 logical conditions in Pindar, 19 refer to the victor either in terms, O 6, 77; P 1, 87. 90; 3, 80; N 2, 6; 3, 19; 4, 79; or with more reserve under cover of a *τις* or the like, O 2, 62; 5, 23; 11 (10), 5; 14, 7; P 3, 80. 103; 11, 55; 12, 28; N 11, 13; I 3 (4), 1; 4 (5), 22; 5 (6), 10; 8 refer to the poet or his Muse expressly, O 1, 3. 19; 8, 55; 9, 26; P 11, 41; N 7, 69. 75; 9, 28; to an enemy three, P 2, 58; 8, 73; I 1, 66. Adjuration takes the logical form as a matter of course, O 1, 77; I 5 (6), 42; and akin is *εἰ* = *ἐπει*, O 3, 42.

Of the generic sentences not included in the exhibit given above, some may be referred without difficulty to specific realization. So O 1, 66 has reference to Tantalus, and the others might easily be disposed of, if we were to allow ourselves the latitude of interpretation indulged in by some commentators. But there is no gain in denying the generic. Let O 14, 7; P 4, 145; I 6 (7), 43 be generic. What we have gained for Pindar is his conception of this relation. It is not so much that of a class as of a type, and so it was in the beginning, as I have said. So it was with the generic article, so it was with the gnomic aorist. The 'any one' was 'some one,' the ideal second person, a true 'thou.'

I now give a list of the logical conditions¹ in Pindar arranged according to the verb of the protasis. The protasis precedes in the vast majority of instances. Where it is subsecutive I have indicated the fact by *s.*

<i>Protasis.</i>	<i>Apodosis.</i>
Present:	
O 1, 3	Imv.
66	Pres. ind.
77	Imv.
2, 62 (<i>οἰδεν</i> = pres.)	<i>s.</i> ² Pres. ind.
3, 42	Pres. ind.
5, 23	Imv. subj.
9, 26 <i>s.</i>	Fut. ind.
11 (10), 5 (<i>πράσσει</i>)	Pres. ind.
P 1, 87	Pres. ind.
90	Imv.
2, 58	Pres. ind.
3, 80	"
85 <i>s.</i>	"
103	"
4, 145 (others <i>πελη</i>)	"
8, 73 (<i>πέπαται</i> = pres.)	"
9, 50	Fut. ind.
N 4, 79	Imv.
5, 50	"
7, 69 <i>s.</i>	Fut. or fut. w. <i>άν</i> .

¹ I have not included the corrupt *εἰ . . . κατάκειται* I 1, 41.

² Condition an afterthought, a saving clause, according to the usual interpretation.

³ So with Christ for *πράσσει* (Hartung *πράσσει*).

*Protasis.**Apodosis.*

Present:

N 7, 86
10, 83
85
I 1, 67
3 (4), 1
5 (6), 10
6 (7), 43
Fr. VII, 4, 9¹

Opt. w. κε.
Pres. ind.
Opt. w. κε.
Pres. ind.
" "
" "
" "
" "

No verb, present to be supplied:

O 14, 7 s.
P 9, 93
12, 28
N 9, 28

Pres. ind.
Imv.
Pres. ind.
"

Future (?):

O 7, 1
N 11, 13

Aor. ind. (paradigmatic).
Imv.

Perfect:

N 2, 6 s.
5, 19
I 4 (5), 22

Pres. ind.
Opt. in an imv. sense.
Imv.

Imperfect:

N 7, 74

Pres. ind.

Aorist:

O 1, 19 s.
55
6, 77
8, 54
P 11, 41
55 s.
N 3, 19
7, 75
11, 13
I 5 (6), 42

Imv.
Impf.
Pres. ind.
Imv.
Pres. ind.
"
"
"
"
Imv.
Pres. ind.

Pindar like Homer has no great love for *ει* with the future indicative. True, there is a clear fut. ind. in Fr. VII, 4, 15 as is shown both by the combination with the present and by the minatory character, but the other examples are, to say the least, uncanny. Where *παραμένεται* stands (Bdgk. *προμένεται*) we should expect the present, N 11,

¹ To these may be added N 4, 36 *καὶ περ* (*κεῖπερ*) *ἐχει*.

13; *παραμεύσεται* (subj.) and *ἐπιδείξῃ* might pass, or, by transposition, *ἄλλος παραμεύσατο μορφā*. I find no difficulty in considering *δωρίσεται* a subjunctive, and can see no valid reason for asserting, as commentators do, that Pindar does not use the so-called short form (see Stier, Curt. Stud. 2, 137; Gust. Meyer, Gr. Gr. § 528, s. 402. To me *αὐδάσομεν*, O 1, 7, which is combined with an imperative, is a subjunctive, and *βάσομεν*, O 6, 24, which is combined with a subjunctive, is a subjunctive, and *δέξεται* in a generic relative sentence, Fr. X, 4, 2, is a subjunctive.

In Pindar the Anticipatory Condition appears only in the older form *εἰ* with the subj., and only in the generic sense. In Homer *εἰ* w. subj., *εἴ κεν*, *αἴ κε*, *ην*, *εἴ ἀν* w. subj. all occur, the last mentioned rarely. That these forms were differentiated in pre-Homeric times is not unlikely, and there is a trace of such differentiation in Homer's preference for *εἰ* w. subj. in generic conditions and in conditions within a comparison (comp. *ὡς δ' ὅτε* w. subj.)¹

¹ I have purposely expressed myself with reserve. To exclude *ἀν* (*κέν*) from all generic sentences in Homer, as has been done, seems to require too much sleight of interpretation. The questionable conditional sentences may be very few, but the temporal and relative sentences are numerous. Bäumlein, who says (s. 221): *es ist doch bemerkenswerth dass Homer αἴ κεν, εἴ κεν u. ἀν [he means εἴ ἀν] nur bei der Voraussetzung der Verwirklichung einzelner Fälle, nicht aber bei allgemeinen Annahmen zu gebrauchen scheint*, accepts the generic for *ὅτε κεν*, Z 225, Θ 242, λ 218, ν 180, *ὅππότε κεν* Δ 40, γ 237, *ὅτι ἀν* B 397, Ι 101, λ 18, *ἄς ὅτι ἀν* K 5, Λ 269, M 41 [?], Ο 80, 170, P 520, ε 394, κ 410 [? comp. M 41], χ 468, ψ 233, *ὅππότι ἀν* Ο 209, λ 17. But at this point Bäumlein gives up the analysis into particular and generic as unessential and as not always practicable. Of the other examples which he gives *εἴτι ἀν* ρ 320, 323 would be considered by most persons generic, and so *ἐπεικεν* B 475, Θ 554 and *ἐπίην* Θ 553, κ 411, λ 192. Under the relative he gives for *ὅς κε* Α 139, 218, B 231, 346, 367, 391, Γ 354, Δ 306, Z 228, β 128, δ 29, 196, ζ 28, 159, 202 [?], Θ 586, κ 22, 327, 434 [?] for *ὅστις κε* Α 294, 527, Γ 279, γ 355, Θ 549 [?], λ 147, ξ 445; for *ὅς αἴν* Ο 348, τ 332, φ 294. Some of these passages are doubtless open to objection, but the number of those in which the use would correspond exactly to the Attic use of *ἀν* and the subj. might be increased. In his Homeric Grammar, which is certain to have a marked effect on studies of this kind in England, Mr. Monro excludes *ἀν* and *κέν* from all references to frequent and indefinite occasions. It has been seen that Bäumlein was exposed to the same temptation and withstood it. Mr. Monro acknowledges the existence of exceptions, but he says they are chiefly found (1) 'in clauses which restrict or qualify a general supposition already stated, and (2) where a distinction or contrast is implied.' It is tolerably evident that this cannot be called a good working rule, and Mr. Monro's prejudice against *ἀν* in a generic sentence is strikingly shown (p. 51) where he says that the use of *ὅτι ἀν* in a simile is not Homeric, despite the string of examples cited above and those given in Leo Meyer's AN (s. 27), which he had

Of the first class, A 80 sqq.

κρείσσων γάρ βασιλεύς, ὅτε χώσεται ἀνδρὶ χέρῃ·
εἴ περ γάρ τε χόλον γε καὶ αὐτῆμαρ καταπέψῃ
ἀλλά τε καὶ μετόπισθεν ἔχει κότον κτέ.

comp. Δ 261, Κ 225, α 168, μ 96, ξ 373, π 98, 116.

Of the second class, Λ 116:

ἢ δ' εἴ πέρ τε τύχησι μάλα σχεδόν, οὐδὲν δύναται σφιν
χραισμένιν κτέ.

comp. Φ 576, Χ 191.

This use of *εἰ* with the subj. as the original and normal form for the generic conditional, accounts for the fact, otherwise unexplained, that in standard Greek *έάν* or *ην*, when transferred to the past, 'becomes,' in common parlance, *εἰ* with the opt., in apparent contravention of the rule that *ἄν* in *oratio recta* always reappears in *oratio obliqua*. So *ὅταν* w. subj., *ἐπειδάν* and the rest 'become' *ὅτε*, *ἐπειδή* and the rest with the opt., the truth being that *εἰ*, *ὅτε*, *ἐπειδή* and the rest with the subj. are the old forms which have naturally a corresponding *ἄν*, *ὅτε*, *ἐπειδή* and the rest with the opt., and this transfer to *oratio obliqua* was settled before *έάν*, *ὅταν*, *ἐπειδάν*, etc. became fixtures. The occasional emergence of *έάν*, *ὅταν* and the like with the optative may be due in part to a rebellion against a misunderstood tradition. *Εἰ* with the subj. is sometimes found in prose as a conditional form, but it is always or almost always open to suspicion. *Εἰ* w. subj. occurs more frequently in Attic poetry, but confusion with the opt., *e. g.* *τίχη* with *τίχοι*, often lies so near as to suggest a slip on the part of the scribe. In the few passages that are unimpeachable it would seem that a singular upturning has taken place. In Homer *εἰ* with the subj. is as colorless as *έάν* with the subj. in prose; whereas, as I hinted on another occasion, *εἰ* with the subj. in Attic approaches in tone the harshness of *εἰ* with the fut. ind. This is due in all likelihood to the exclusively imperative use of the pure subj. in Attic, a force which is made more sensible in this special case by the existence of the interrogative *εἰ* with the subj., so that we shall not go far wrong, if in the particular condition we make the significance of the Attic condi-

before him: In Pindar I would note in passing that *ως ὅτε* is commonly used without a verb, Ο 6, 2; Ρ 11, 40; Ν 9, 16; Ι 5 (6), 1. When it takes a verb, it is in the indicative and not in the subj., Ν 8, 40.

tional *εἰ* with the subj. = *εἰ δεῖ* w. inf. However that may be, Pindar is Homeric in his use of *εἰ* w. subj.; non-Homeric in his exclusive use of it.

The examples are few :

O 6, 11 : πολλοὶ δὲ μέμνανται καλὸν εἴ τι ποναθῆ (generic).

P 4, 263 presents us with a specimen of *εἰ* with the subj. in comparison, if we follow the editors and not the MSS. Every one knows the allegorical subtlety of the passage, very different from the transparent disguise of the logical condition already cited. But the last word on this riddle has not been said.

P 4, 273 : ἐπὶ χώρας αὐτὶς ἔσται δυσπαλὲς δὴ γίνεται, ἐξαπίνας | εἰ μὴ θεὸς ἀγεμόνεσσι κυβερνατὴρ γένηται (generic). The practical application follows.

N 7, 11 : εἰ δὲ τύχη τις ἔρδων, μελίφρον' αἰτίαν ῥοᾶσι Μοισάν ἐνέβαλε. v. 14 : ἔργοις δὲ καλοῖς ἐσοπτρον' ἵσταμεν . . . εἰ εὑρηται ἄποινα μόχθων. The MSS have εὑρηται τις, Schmid read εὑρη τις.

N 9, 46 : εἰ γὰρ ἄμα κτεάνοις πολλοῖς ἐπίδοξον ἄρηται | κῦδος, οὐκέτ' ἔστι πόρσω θνατὸν ἔτι σκοπιᾶς ἄλλας ἐφίψασθαι ποδοῖν. Bergk's reading ἵστω λαχῶν πρὸς δαιμόνων θαυμαστὸν δλθον, εἰ—άρηται does not change the character of the conditional.

I 3 (4), 58 : τοῦτο γὰρ ἀθάνατον φωνᾶν ἔρπει, | εἴ τις εὐ εἴπη τι.

I 4 (5), 12 : δύο δέ τοι ζωᾶς ἀωτον μοῦνα ποιμάνοντι τὸν ἀλπνιστὸν, . . . | εἰ τις εὐ πάσχων λόγον ἐσλὸν ἀκούῃ. As this is the only passage in which the pres. subj. occurs, a change to the aorist is suggested. It is very significant that the particular proposition follows in the opt., πάντ' ἔχεις, εἰ σε τούτων μοῦρ' ἐφίκοιτο καλῶν.

Fr. II 11, 5 : εἰ δέ τις ἀνθρώποισι θεόσδοτος ἄτα | προστύχη, ταύταν σκότει κρύπτειν ἔσικεν.

In exhibiting the Ideal Condition in Pindar I shall take up first the more regular forms with *εἰ* and opt. in the protasis, followed by opt. and *κέ* in apodosis; *κέ*, for Pindar does not use *ἄν* w. opt. in a formulated conditional sentence. No poet shows better how this condition originated than Pindar, and in some passages the editors have punctuated the members so as to indicate the growth. Still we must not forget that to Pindar himself the conditional sentence was sufficiently well articulated.

O 1, 111 : εἰ δὲ μὴ ταχὺ λίποι (wish), | ἔτι γλυκυτέραν κεν ἔλπομαι . . . κλείξειν.

O 6, 4 : εἰ δ' εἴη μὲν Ὀλυμπιονίκας . . . τίνα κεν φύγοι ὑμνον κεῖνος ἀνήρ; | ἵστω γὰρ ἐν τούτῳ πεδίλῳ δαιμόνιον πόδ' ἔχων. A fair dream, too fair to come to pass, and yet it has come to pass. Comp. a similar

change of tone in Plat. *Sympos.* 175 E: *εὐ ἀν ἔχοι . . . εἰ τοιοῦτον εἴη η σοφία* followed by *εἰ γὰρ οὕτως ἔχει καὶ οὐ σοφία* with a delightfully humorous change of tone, as if the fanciful supposition could be argued about.

P 3, 110: *εἰ δέ μοι πλοῦτον θεὸς ἀβρὸν ὄρέξαι, | ἐλπίδ' ἔχω κλέος εὐρέσθαι καν ὑψηλὸν πρόσω.*

A loose-jointed condition is found:

P 1, 46: *εἰ γὰρ οὐ πᾶς χρόνος . . . εὐθύνοι* which wish is followed by *ἢ καν ἀμνάστειν.* Of such sentences there are many in Homer.

Those who recognize a kind of religious connexion between *εἰ* with the opt. in protasis and the opt. with *ἄν* (*κέν*) in the apodosis will not be pleased to see that the majority of Pindar's ideal conditions are 'irregular.' The fut. and the opt. with *ἄν* (*κέν*) are often interchangeable to our idiom. We have no pure future, and our translation of a Greek opt. with *ἄν*. The large use of the opt. and *ἄν* in standard Greek is due, as I have repeatedly urged, to the greater temporal exactness and to the total negation conveyed by the aorist. So *εἰ* with opt. is followed by the future:

O 13, 105: *εἰ δὲ δαιμῶν γενέθλιος ἔρποι, | Δι τοῦτ' Ἐναλίφ τ' ἐκδώσομεν πράσσειν.* A verb of hoping precedes.

With present in the apodosis:

P 1, 81: *καιρὸν εἰ φέγγειαι . . . μείων ἐπεται μῶμος ἀνθρώπων* (wish followed by an emphatic present 'is sure to ensue.')

P 8, 13: *κέρδος δὲ φίλτατον, ἐκύντος εἰ τις ἐκ δόμων φέροι* where *φέρη* is indeed possible. Still *εἰ τις φέροι* = *φέρειν* is an equation that solves many apparent irregularities even in Attic, and there is besides an element of wish. In like manner explain:

I 2, 33: *οὐ γὰρ πάγος οὐδὲ προσάντης ἀ κελευθος γίνεται, | εἰ τις εὐδόξων ἐσ ἀνδρῶν ἄγοι τιμᾶς Ἐλικωνιάδων.* The opt. of wish follows in *ἀκοντίσταιμι.*

I 4 (5), 14: *πάντ' ἔχεις, | εἰ σε τούτων μοῖρ' ἐφίκοιτο καλῶν.* Here *ἔχεις* may be considered an equivalent to a future as above. The wish is realized, but fact seems still to be fancy.

Of the ideal conditionals there remains for discussion:

N 7, 89: *εἰ δ' αὐτὸν καὶ θεὸς ἀν ἔχοι* (so the codices; some editors give *ἀνέχοι*, Bergk *ἀλέγοι*). Pindar does not use *ἄν* in the formulated conditional sentence (if we except *ἄν ἐρεῖ* N 7, 68), and while no Greek scholar can boggle at *ἄν* and the opt. in the protasis, if it makes a fair sense, the use of it here is suspicious. And then what does *εἰ θεὸς ἀν ἔχοι* mean? Neither *ἀνέχοι* nor *ἀλέγοι* is satisfactory,

and the passage must be left for the present among the puzzles of that difficult ode.

The following are the few Unreal Conditionals in Pindar:

O 12, 16: *ἡ τοι καὶ τεά κεν . . . ἀκλήσ τιμὰ κατεφυλλορόησε ποδῶν, | εἰ μὴ στάσις ἀντιάνειρα Κνωσίας σ' ἄμερσε πάτρας.*

P 3, 73: *εἰ κατέβαν ὑγίειαν ἄγων χρυσέαν . . . ἀστέρος οὐρανίου φαμὶ τηλανγέστερον κείνῳ φάσι ἐξικόμαν κε βαθὺν πόντον περάσαις.*

N 4, 13: *εἰ δ' ἔτι ζημενεῖ Τιμόκριτος ἀελίφ | σὸς πατὴρ ἐθύλπετο, ἀμα κε τῷδε μέλει κλιθεὶς ὑμνον κελάδησε καλλίνικον.* (If he were living, he would have sounded forth.)

N 7, 24: *εἰ γὰρ ἦν (it was not and is not possible) | εἰ (sc. ὅμιλον ἀνδρῶν τὸν πλεῖστον) τὰν ἀλάθειαν ἰδέμεν, οὐ κεν ὅπλων χολωθεὶς | ὁ καρτερὸς Λίας ἔπαξε διὰ φρενῶν | λευρὸν ξίφος.*

Looser in structure with prominence of the original hopeless wish:

P 4, 43: *εἰ γὰρ οἴκοι νιν βάλε (would that he had). . . . τετράτων παιδῶν κ' ἐπιγεινομένων αἷμά Φοι κείναν λάβε σὸν Δαναοῖς εὑρεῖαν ἀπειρον.*

P 3, 63: *εἰ δὲ σώφρων ἀντρον ἔναι' ἔτι Χείρων . . . λατῆρά τοι κέν νιν πίθον . . . παρασχεῖν.*

In the sentence:

P 3, 1: *ἡθελον Χείρωνά κε Φιλυρίδαν, | εἰ χρεῶν τοῦθ' ἀμετέρας ἀπὸ γλώσσας κοινὸν εῦξασθαι Φέπος,* the apodosis of *εἰ χρεών* (sc. ἔστι) is the utterance itself, and the condition is logical = *οὗτος εὔχομαι, εἰ χρὴ εὔξασθαι.*

I have now completed the survey of the Pindaric conditional sentence. The predominance of the logical hypothesis is its most striking feature, but not the only thing worthy of note. The narrowing of epic licence is of itself a matter of importance. The Homer that Pindar knew did not sway his syntax in this great class of sentences. Pindar is simple, clear, cold. All the coloring and shading of the ever fluctuating Homeric conditional, which is all things to all circumstances, is replaced by simple formulae. There is, of course, some play of fancy in the ideal conditional; Pindar is a poet and a great poet, but he is not an eagle nor a river, and works quietly and consciously for the most part, even if he does not compose lyric sermons with seven or eight heads, more or less, according to the Terpandrian *νόμος*.

II.—ON *AN* AND *KEN* IN PINDAR.

As the particles *āv* and *κέν* are so largely used in certain classes of conditional sentences, I have thought it best to complete this exhibit by a conspectus of Pindar's use of them. Some scholars suppose that *āv* and *κέν* have exactly the same function and are differentiated by dialect only, *κέν* (*κά*) belonging to the Aeolic (Doric) dialect, *āv* to the Ionic, the dominant occurrence of *κέν* in Homer being explained by the adoption of a large number of Aeolic forms, or, according to a more adventurous hypothesis, by the transfusion of an older Homer from an Aeolic original.¹ Others have maintained that they are not only etymologically but functionally different, and many attempts have been made to formulate that difference, from Sommer down. Most of these experiments are briefly stated in Ebeling's *Lexicon Homericum* s. v. *κέ*. Sommer's essay I know only from Bäumlein's discussion of it (*Untersuchungen über die griechischen Modi*, p. 63). The samples there given show that it is an eloquent production, which sets forth the consequences of a reckless substitution of *āv* for *κέ* in appalling language. "Substitute *āv* for *κέ* in Homer," he cries, "and you produce a form of thought that is by no means in harmony with the simplicity, freedom, and liveliness of the epic language, with its vigorous sensuousness, its passion, its confident bragging, its honest good nature, and its constant quasi-gesticulation." Substitute *āv* for *κέ* and you sickly o'er the speech of Homer with the pale cast of thought, you introduce the abstract notion of conditionality, you utterly debauch the uncorrupted simplicity of the good old Epic. In fact, a history of Greek literature might be based on these momentous particles. So the Attics discarded *κέ*; they were colder, more subtle, more calculating than the Dorians. So Herodotos, renegade Dorian that he was, renounced a particle dear to the Doric dialect and set the seal to his apostasy. But while the metaphysics of fifty years ago may provoke a smile, it is not at all certain that much progress has been made in the differentiation, and many of the formulae that have been used since Sommer's time

¹ In the *Sitzungsberichte der K. bayer. Akademie Philol. Classe*, 1880, Heft 1, s. 73, v. Christ still follows Pott and Benfey in considering *āv* as a dialectal variety of *κέ*, an acephalous or akappous *κάν*, which he regards as proved by the Arcadian inscription cited in Cauer's *Delectus* 117. Gustav Meyer on the other hand (Gr. Gr. s. 26) says that, as the inscription has *āv* everywhere (so, for instance, *δ' āv*), we must read *κάν*, not *κάν*, and goes on to show, by the help of the potent *nasalis sonans*, that *κά* and *κέ* (*κέν*) must have been different originally.

are no better, even if they are more intelligible than his. The comparative grammarians, to whom we ethnic grammarians look for light, give us very little help and leave us to our own devices. Delbrück¹ maintains that *ἀν* and *κέν* are etymologically absolutely

¹ Delbrück first enunciates his view thus (Conj. u. Opt. p. 23): *κέν* und *ἀν* haben nicht die Macht, den Gebrauch des Modus zu modifizieren, sondern sind sprachliche Zeichen des modifizirten Gebrauches; and again where he treats the matter at greater length he says (p. 90): sie begleiten den Conjunctiv u. Opt. durch alle inneren Wandlungen, aber sie erzeugen dieselben nicht. In other words, subjunctive and opt. may have the same signification with *ἀν* and *κέν* as without *ἀν* and *κέν*. Only in the course of time, by some mysterious process, the subj. attended by *ἀν* differentiates itself from the pure subj., opt. and *ἀν* from pure opt. 'Αν and *κέν* of themselves point only to the 'ingress of the action.' But this does not explain how wish was turned into potentiality, demand into prediction; and indeed the abstention from explanation may be the wisest possible course. Only it has always seemed to me that Hermann himself did not draw the legitimate consequences from his own theory, neither have those who consider *ἀν* and *κέν* to be particular demonstratives—a view which brings them dangerously near to *γέ*—stretched that theory to its utmost. Hermann makes *ἀν* with the opt. further from reality than the pure opt. This is contradicted by the whole tenor of the language and is in contravention of his own principle of conditionality. Condition a wish at any point and you remove it from the realm of wish to the realm of thought. It becomes something calculable, something that can be asserted. It moves into the sphere of the indicative. Narrow the subj., the opt., to a case or class of cases, and the subjunctive, the opt., cease to be absolute. If this view is true, we shall have to consider *ἀν* and *κέν* as something more than mere attendants on subj. and opt. Nor will the theory of attendance satisfy the conditions in the case of *ἀν* with the indicative. 'Αν (*κέν*) is necessary for the unreal, for the ideal, indicative aor. That it is not necessary for the unreal imperfect lies in the durative character of the tense. Those who maintain that *ἀν* when combined with the subj. 'belongs to' the leading particle or the relative, are really maintaining that the *ἀν* of the subjunctive belongs to the apodosis, a position which is utterly untenable. That it ceased to be felt, that it became a mere formula is clear enough; but Pindar's usage, arbitrary as it may seem, is at least suggestive. The large use of subj. with *ἀν* in the temporal sentence, from which the future indicative is practically excluded in prose except in a narrow class, is to my mind due to the necessity felt for a sharper future, for a future which should show the relativity of the clauses more distinctly than the future indicative could do. Whatever difference there may have been between the subj. and the subj. with *ἀν* was effaced in the interest of exact temporal relation. The relative followed, then the conditional, with traces enough in poetry of the old pure subjunctive usage. In the same way the optative with *ἀν* gave the color to the future relation, which was denied to the future tense by its subjunctive affinities; it gave the exactness of duration, attainment, ingress which could only be found in the modal spheres of present, second aorist and first aorist. English has gone a similar way but has gone further. 'Will' and 'shall' have virtually crowded out the future from the principal sentence except where the will is the deed.

different, *κέν* being the Sanskrit *kam* (so that this 'familiar beast' of a particle ultimately 'signifies *love*'), while *ἄν* has no foreign parallel; but he comes to the conclusion that neither the parallel with *kam* nor the etymology is of any avail. Leo Meyer—to cite authorities not mentioned in the Lexicon Homericum—has convinced himself that *ἄν*, so far from having no foreign parallel, is identical with Latin *an* and Gothic *an*. In other words, he has gone back to Bopp's view, and a simple demonstrative is wrested into an alternative. It would have been safer to have kept *ἄν* back on remoter ground, for the Latin *an* itself is often a simple 'then.' In a recent treatise Dr. Thiemann (Grundzüge der homerischen Modussyntax, p. 56) sums up his investigation thus: "By the particle *κέν* the speaker points to himself so far as there is a reference of his own will or his own representation (*Vorstellung*) to the action; by the particle *ἄν* the speaker points to special circumstances which may lie beyond his calculation, but which are intended to serve as a ground or modification of the thought." That is to me nothing but the old tune of *ἄν* objective, *κέν* subjective; nothing but Cas selmann's *κέν* ad cogitationem eius qui loquatur, *ἄν* ad rem ipsam referri, nothing but Sommer's bragging *κέν* and his calculating *ἄν*. We do not advance an inch.

Mr. Monro in his recently published Homeric Grammar, which is doubtless more accessible to my readers than the various monographs cited in the Lexicon Homericum, after committing himself to the view that the primary use of *ἄν* and *κέν* is to show that the speaker is thinking of particular instances or occasions, devotes a section to 'the difference of *ἄν* and *κέν*', and notices the greater frequency of *κέν*, the preference for *ἄν* in negative clauses, the rare use of *ἄν* with the relative, the employment of *κέν* both in protasis and apodosis, whereas *ἄν* is especially used in the second of two parallel or connected clauses, and the indications of the use of *ἄν* as a more emphatic particle than *κέν*, and sums up thus: "The general effect of these differences of usage between the two particles seems to be that *ἄν* is used either in an *adversative* sense—with a second or opposed alternative—or when greater *emphasis* has to be expressed." *Κέν* is approximately 'then,' 'in that case,' *κέν*—*κέν* 'in one case,' 'in another case,' *ἄν* 'then indeed,' 'then rather,' 'even in that case.' Mr. Monro also calls attention to the difference of the accent, a point which Lange had emphasized before him. The enclisis of *κέν* seems to me to indicate that *κέν* had passed through the stages which *ἄν* had not yet wholly completed, when we first become

acquainted with Greek. Lange's parallel of *ἄν* with *εἰς* and *κέ* with *τις* is peculiarly suggestive in view of the Germanic treatment of 'einer' and 'one.'

The degradation of *ἄν* from an original demonstrative 'that,' 'other,' or what not, may be fairly paralleled by the fortunes of the demonstrative *τέως*. *Τέως*, 'so long,' originally a strong demonstrative correlative of *τις* is used comparatively seldom with an expressed term. The limit is often brought in as an afterthought, suggested, implied, left vague. *Τέως* is often practically 'for a while,' 'for the time being.' This is just the way that *ἄν* behaves. Now it has a definite reference, now it is indefinite. Sometimes the reference is supplied by the context, sometimes by the opposite. But we can still divine its history. Not so with *κέν*. *Κέν* has passed through all the stages that *ἄν* was to traverse.

But whatever difference of etymology or function there may have been, in Pindar's use there is little vestige of the original diversity. What little trace there is, however, will best appear upon exhibition of the use.

The occurrences of *κέν* that I find recorded are thirty-three:

1. Ο 1, 84: *τά κέ τις ἀνώνυμον γῆρας . . . ἔψοι μάταν.* 2. Ο 1, 111: *εἰ δὲ μὴ ταχὺ λίποι, ἔτι γλυκυτέραν κεν ἔλπομαι . . . κλεῖξειν.* 3. Ο 6, 4: *εἰ δὲ εἴη μὲν Ὀλυμπιονίκας . . . τίνα κεν φύγοι ὑμνον.* 4. Ο 8, 82: *ἐνέποι κεν Καλλιμάχῳ.* 5. Ο 10 (11), 20: *θίξαις δέ κε φύντ' ὄρετῷ ποτὶ | πελάριον ὄρμασαι κλέος.* 6. Ο 12, 13: *ἡτοι καὶ τεά κεν . . . ἀκλεής τιμὰ κατεφυλλορόησε ποδῶν, | εἰ μὴ στάσις . . . σ' ἀμερσε πάτρας.* 7. Ρ 1, 45: *εἰ γὰρ δὲ πᾶς χρόνος ὅλθον . . . εὐθύνοι . . . ἡ κεν ἀμυάστειν.* 8. Ρ 1, 69: *σύν τοι τίν κεν ἀγητὴρ ἀνὴρ . . . δάμον . . . τράποι . . . ἐσ ἡσυχίαν.* 9. Ρ 3, 1: *ἡθελον Χείρωνα κε Φιλυρίδαν.* 10, 11. Ρ 3, 63: *εἰ δὲ σώφρων ἄντρον ἔται' ἔτι Χείρων . . . λατῆρά τοι κέν νιν πίθον καὶ νῦν . . . παρασχεῖν καὶ κεν ἐν ναυσὶν μόλον.* 12. Ρ 3, 73: *εἰ κατέβαν ὑγίειαν ἄγων . . . ἀστέρος . . . τηλαυγέστερον κείνῳ φάος ἔξικόμαν κε.* 13. Ρ 3, 110: *εἰ δέ μοι πλοῖτον θεὸς ἀβρὸν ὄρέξαι, ἐλπίδ' ἔχω κλέος εύρεσθαι κεν ὑψηλὸν πράσω.* 14. Ρ 4, 43: *εἰ γὰρ οἴκοι τιν βάλε πάρ χθόνιον | "Αἰδα στόμα . . . τετράτων παιδῶν κ' ἐπιγεινομένων αἴμα . . . κείναν λάβε σύν Δαναοῖς εὐρεῖαν ἀπειρον.* 15. Ρ 4, 50: *νῦν . . . εύρήσει . . . γένος, οἵ κεν . . . τέκωται . . . δεσπόταν.* 16. Ρ 4, 293: *εὐχεταί . . . οἴκον ἰδεῖν . . . καὶ κε μυθίσταις ὄποιαν Ἀρκεσίδᾳ | εὑρε παγάν ἀμβροσίων ἐπέων.* 17. Ρ 7, 20: *φαντί γε μὰν οὔτω κεν ἀνδρὶ παρμονίμαν | θάλλοισαν εὐδαιμονίαν | τὰ καὶ τὰ φέρεσθαι.* 18. Ρ 10, 61: *τῶν δὲ ἔκαστος ὄρούει, τυχών κεν ἀρπαλέαν σχέθοι φροντίδα.* 19. Ν 4, 7: *ρῆμα δὲ ἐργμάτων χρονιώτερον βιοτεύει, ὅ τι κε . . . γλώσσα φρενὸς ἐξέλοι (ἐξελῆ) βαθείας.* 20. Ν 4, 13: *εἰ δὲ ἔτι ζαμενεῖ Τιμόκριτος ἀελίῳ | σὸς πατήρ ἐθάλπετο . . . θάμα κε τῷδε μελει κλιθεῖς*

υμνον κελάδησε καλλίνικον. 21. N 4, 30: ἀπειρομάχας ἐών κε φανείη λόγον δο μὴ συνιείς. 22. N 4, 93: οἶνον αἰνέων κε Μελησίαν ἔριδα στρέφοι. 23. N 6, 72: δελφῖνι κεν τάχος εἰκάζοιμι Μελησίαν. 24. N 7, 25: εἰ γάρ ἦν | ἐτὰν ἀλάθειαν ιδέμεν, οὐ κεν ὅπλων χολωθεῖς | ὁ καρτερὸς Λίας ἔπαξε διὰ φρειῶν λευρὸν ξίφος. 25. N 7, 86: εἰ δὲ δεύεται | ἀνδρὸς ἀνίρ τι, φαῖμέν κε γείτον' ἔμμεναι . . . χάρμα πάντων ἐπάξιον. 26. N 7, 89: εἰ δ' αὐτὸ καὶ θεὸς ἀνέχοι, | ἐν τίν κ' ἐθέλοι . . . εὐτυχῶς ναίειν. 27. N 9, 34: Χρομίω κεν ὑπασπίζων . . . ἔκρινας ἀν κίνδυνον. 28. N 10, 39: ἀξιωθείην κεν, ἐών Θρασύκλου . . . ξύγγονος, Ἀργεῖ μὴ κρίπτεν ὄμμάτων. 29. N 10, 87: εἰ δὲ καστγνήτου πέρι | μάρνυσαι . . . ἡμισυν μέν κε πνέοις. 30. I 4 (5), 48: καὶ νῦν . . . μαρτυρήσαι κεν πόλις. 31. I 5 (6), 72: φαῖης κέ νιν . . . ἔμμεν Ναξίαν . . . ἀκόναν. 32. I 7 (8), 45: ἐρατὸν λύοι κεν χαλινὸν ὑφ' ἥρωι παρθενίας. 33. Fr. IX, 3, 2: ἐν ξυνῷ κεν εἴη . . . γλυκερὸν κέντρον.

As to Mood and Tense:

Indic. Imperf.	9	I
Aor. 6, 10, 11, 12, 14, 20, 24, 27	8	
Opt. Pres. 1, 4, 22, 23, 26, 29, 32, 33	8	
Aor. ¹ 3, 5, 7, 8, 16, 18, 21, 25, 28, 30, 31	11	
Subj. Aor. 15, 19 (schol.)	2	
Inf. Pres. 17	I	
Aor. 13	I	
Fut. 2	I	

33

As to Character:

The classification of these examples is not easy. Most of them occur in conditional complexes. So 2, 3, 5, 6, 7, 8, 10, 11, 12, 13, 14, 16, 18, 20, 21, 22, 24, 25, 26, 27, 29. Few of them are regularly formulated; for though Pindar is familiar with the formula, he still retains the sense of the origin. Clearly formulated are 2, 3, 6, 13, 24, 25, 26, 29, but some are loose-jointed—a wish followed at a distance by a thought, 7, 10, 11, 12, 14, 20—one, 16, involves a wish, the rest have the protasis involved in a participle, 5, 18, 21, 22, 27, 28, or a demonstrative 17, or a modifier as *σὺντίν* 8. There is one Homeric *οἴ κεν* with the subj. as an exact future 15, one generic relative if we trust the scholia 19. The rest of the thirty-three are potentials and there is nothing gained by forcing them into the conditional formula. So 1, 4, 9, 23, 30, 31, 32, 33. It may be worth

¹ It may be well to add that *φαῖμεν* (N 7, 87), *φαῖης* (I 5 (6), 72), and *σχέθοι* (P 10, 61, comp. I 4, 72), are counted as aorists.

noticing that there is no negative expressed except 25 (N 7, 25), but a negative is implied 1 (O 1, 84), 3 (O 6, 6).

Formulated conditionals	8
Half formulated	6
Involved	9
Relative conditional (generic)	1
With subj. as exact future	1
Potential	8

33

**Αν* occurs :

1. O 2, 18: ἀποιητον οὐδ' ἀν χρόνος . . . δύναιτο θέμεν . . . τέλος. 2. O 2, 20: λάθα δὲ πότμῳ σὺν εὐδαιμονι γένοιτ' ἄν. 3. O 2, 110: τίς ἀν φράσαι δύναιτο. 4. O 6, 67: εὐτ' ἄν . . . Ἡρακλέης . . . κτίσῃ. 5. O 7, 42: ὡς ἀν θεῷ κτίσαιεν. 6. O 8, 62: κεῖνα δὲ κεῖνος ἀν ἔιτοι | ἔργα περαιώτερον ἀλλων. 7. O 9, 30: πῶς ἀν . . . Ἡρακλέης σκύταλον τίναξε. 8. O 13, 46: οὐκ ἀν εἰδείην λέγειν. 9. O 13, 103: τότ' ἀν φαίην σαφές. 10. P 1, 100: ὃς ἀν ἐγκύρσῃ καὶ ἐλη . . . στέφανον δέδεκται. 11. P 3, 106: εὐτ' ἀν . . . ἐπιβρίσῃ (Mommsen after the schol.), ἐπιβρίσαις ἔπηται (Bergk). 12. P 4, 76: εὐτ' ἀν . . . μόλη. 13. P 5, 65: δίδωσι τε Μοῖσαν οἰς ἀν ἐθέλη. 14. P 9, 119: εἴπε δὲ ἐν μέσσοις ἀπάγεσθαι, ὃς ἀν πρῶτος θορῶν | ἀμφὶ Φοι ψαύσειε πέπλοις. 15. P 10, 23: ὑμητὸς οὗτος ἀνήρ γίνεται σοφοῖς, ὃς ἀν . . . τὰ μέγιστ' ἀέθλων ἐλη. 16. P 10, 29: οὕτε πεζὸς ἴών ἀν εὐροις (the old codices have no ἀν). 17. N 4, 91: τὰ δὲ αὐτὸς ἀν τις ἴδη, ἐλπεται τις ἔκαστος ἔξοχώτατα φάσθαι. 18. N 7, 68: μαθὼν δέ τις ἀν ἐρεῖ. 19. N 7, 89: εἰ δὲ αὐτὸς καὶ θεὸς ἀν ἔχοι (so the best MSS), ἀνέχοι Thiersch, Boeckh, Mommsen, ἀλέγοι Bergk. 20. N 9, 35: ἔκρινας ἀν κίνδυνον, according to some, resumption of preceding κέν, really preposition. 21. N 11, 26: ναὶ μὰ γάρ ὄρκον, ἐμὰν δόξαν . . . κάλλιον ἀν δηριώντων ἐνόστησ' ἀντιπάλων. 22. Fr. IX 2, 10: τάκομαι εὐτ' ἀν ἴδω.

Add to these the passages which have coalesced with ὅτε as ὅταν :

23. O 2, 23: πῆμα θνάσκει . . . ὅταν θεοῦ Μοῖρα πέμπῃ (v. 1 πέμψῃ)¹ κτέ. 24. O 10 (11), 91: ὅταν . . . εἰς Ἀίδα σταθμὸν ἀνήρ ἵκηται . . . ἐπορε . . . βραχύ τι τερπνόν. 25. O 13, 80: κελήσατό νιν ὅταν . . . καρταίποδ' ἀναρύη . . . θέμεν βωμόν. 26. P 2, 11: ἐπὶ γάρ . . . Ἐρμᾶς τίθησι κόσμον, ξεστὸν ὅταν δίφρον κατα-ζευγνύῃ. 27. P 5, 2: ὁ πλοῦτος εὐρυσθενής, ὅταν τις . . . αὐτὸν ἀνάγῃ πολύ-

¹ The durative tenses of πέμπειν are often found where novices would expect the aorist. Πέμπειν does not convey the idea of detachment as 'send' does. Still πέμψῃ here has good warrant.

φιλον ἐπέταν. 28. P 8, 96: ὅταν αἴγιλα διώσδοτος ἔλθῃ, λαμπρὸν φέγγος ἐπεστιν ἀιδρῶν. 29. N 1, 67: ὅταν θεοί . . . ἀντιάζωσιν . . . πεφύρσεσθαι κόμιαν ἔνεπεν. 30. I 2, 47: ταῦτα . . . ἀπόνειμον, ὅταν ἔσινον ἐμὸν . . . ἔλθῃ. ***Αν** has coalesced with ὅπτε: 31. P 1, 4: πείθονται δ' ἀδοῖδοι σάμασιν, . . . ὅπταν . . . ἀμβολὰς τεύχης. 32. P 8, 8: τὸ δ', ὅπταν τις . . . κότον ἐνελάσῃ . . . τιθεῖς ψύριν ἐν ἄντλῳ.¹

But this number is to be reduced to 30 by excluding 19 and 20. Nor is 18 thoroughly satisfactory, for while the future with *ἄν* is not to be scouted so furiously as has been done of late, *ἀνέπει* lies near. 'Any one is welcome to trumpet it.' In 14 *ἄν* may be *ἄνα* and *ἄναθοπών* would give color to the picture. Imagine part at least of the unexpectant youths seated. Still the opt. and *ἄν* can be used in the protasis, and is more frequently used in the protasis of generic relative sentences than might be supposed. In Pindar it is not likely that the construction has shifted from *ὅς ἄν—ψαύσῃ* to *ὅς ἄν—ψάυσει*, which would be a convenient expianation for prose.

As to Mood and Tense:

Ind. Aor. 7, 20 (?), 21	3 (2)
Fut. 18	1
Opt. Pres. 1, 3, 8 (Perf. = Pres.), 19 (?)	4 (3)
Aor. 2, 5, 6, 9 ($\phi\alpha\eta\nu$ = aor.), 14 (?), 16	6
Subj. Pres. 13, 25, 26, 27, 29, 31	6
Aor. 4, 10, 12, 15, 17, 22, 24, 28, 30, 32	10
Pres. or Aor. according to reading 11, 23	2

As to Character:

¹ ἀν τεκειν I 7 (8), 33 has no MS warrant, and is unlikely after πεπρωμένον
ἢ.

² Generic relatives without ἀν occur Ο 3, 11 (ψ τιν . . . βάλη); Ο 6, 75 (οις . . . ποτειτάξη); Ο 8, 10 (ψ τιν . . . ἐσπηται γέρας); Ο 8, 23 (ὅ τι ἡπερ Bergk); Ν 3, 71 (ῶν τις . . . γένηται); Ν 9, 44 (οι . . . γένωνται); Ι 1 50 (ὅς . . . ἀρηται); Ι 6(7), 19 (ὅ τι μῆ σοφίας ἀντον ἀκρον ἵκηται); to which I would add Fr. X 4, 2 (οισ . . . δέξεται = δέξηται). Nearly all aorists.

Temporal (whenever)

Pres. of a single time, definite person	25, 29, 30	3
general of a definite person	23, 31	2
person and time general	27, 28	2
Aor. of a single time, definite person	4, 12	2
general of a definite person	22, 26	2
person and time general	24, 32	2
Doubtful 11 (general)		1
		32 (30)

A comparison of these tables shows that *ἄν* has gained on *κέν*, if we take Homer as a standard. In the Iliad according to Hinrichs' count (see Monro's Homeric Grammar, p. 265), *κέν* stands to *ἄν* as 4 : 1. In Pindar they nearly balance. In the formulated condition (with *εἰ*) *ἄν* is not used at all by Pindar either in protasis or in apodosis, although from its supposed demonstrative nature we should expect it at a time when the conditional must have assumed sharper formulae. Yet at this point Pindar parts company with Homer, or rather, as we have seen, he makes an exclusive rule where Homer only shows preference. There is no *ἄν* in either protasis or apodosis, there is no *κέν* in protasis. So we have a decided narrowing. Even in so-called virtual conditions, *ἄν* is little used by Pindar. So where the participle readily suggests the protasis as in 16 (P 10, 29), *ἰῶν ἄν εὖποις*, Bergk writes *τάχ' εὖποις*, the old MSS having no *ἄν*. 18 (N 7, 68) and 20 (N 9, 32) have been discussed already. This leaves 21 (N 11, 24) where *ἐμὰν δίξαν* prepares us for a potential. Of course it may be maintained that even in Pindar *ἄν* is only a sign and not a cause of the altered use of the mood, as we find the potential opt. without *ἄν*, O 11 (10), 21, where Hartung dares to write *διαλλάξαντ' ἀν ήθος* despite digamma. P 4, 110: *ἴκοιμαν* rests on conjecture, though the conjecture seems inevitable. Still I think it will appear that *ἄν* following *-αν* has often been omitted, not only by accident but on purpose, the delicate ears of poet and rhetorician hating the cacophony. N 5, 20 and P 11, 50 are not stringent, and the famous O 3, 45: *οὐ νιν διώξω* *κεινός εἰην* is to be explained by the imperative optative. 'Set me down an empty fool!' (if I do).

The preference of *ἄν* for the negative as compared with *κέν* comes out, but not startlingly. Mr. Monro accounts for this preference thus: 'When we speak of an event as not happening in certain circumstances we almost necessarily think of the *opposite* circumstances,

those in which it will happen; as *οὐκ ἀν τοι χραῖσμη κιθαρις*, the lyre will not avail (viz. in *battle, whatever it may do elsewhere*).¹ This is essentially Leo Meyer's view. According to this doctrine *ἀν* would produce the effect of a reserve as *γέ* does. But surely this is not the effect of the negative opt. with *ἀν*, which is often made to sweep away every trace of reserve. At least this is what it comes to in Attic. The opt. with *ἀν* gives the warmth of personal conviction and the potential subjunctive has the like force in Latin, as is shown by the striking passage in Livy where *possit* is combined with *potest* (29, 18): *nostras iniurias nec potest nec possit alius ulcisci quam vos*, in which on any theory *nec possit* intensifies *nec potest*. The metaphysics of a suggested opposite will not help us to the conception. See the numerous passages in Greek where the negatived aor. opt. and *ἀν* is coupled with the future positive. Andok. I, 4: *οὐτ' ἀν ὑπομείναμι οἰχήσομαι τε φεύγων*—Ath. Ach. 404: *οὐ γὰρ ἀν ἀπέλθοιμ' ἀλλὰ κόψω τὴν θύραν*—Isokr. 15, 260: *ἔγώ δ' οὐδὲν ἀν ἔποιμι τοιούτον ἀλλὰ ταῖς ἀληθείαις χρήσομαι περὶ αὐτοῦ*—Isai. 6, 23: *οὐκ ἀν ἔτι γένοιντο—φανίσουντο δὲ—καὶ ἔσοιντο*. So with neg. fut. (the difference being one of total negation and persistent negation), Eur. I. A. 310: *οὐν ἀν μεθείμην—οὐδὲ ἔγωγ' ἀφίσομαι*—Hdt. 9, 111: *οὐτε ἀν τοι δοίην θυγατέρα τὴν ἐμὴν γῆμαι οὐτε ἔκεινη πλεῦνα χρόνον συνοικήσεις*. But it is needless to multiply Attic examples, as the usage is doubtless more or less familiar, and it may be considered historically unjustifiable to cite Attic usage on such a matter. And yet it seems to me that in so common a combination as *οὐκ ἀν* with the opt. there can be no break in the tradition. It meant the same thing in the Homeric period, whenever that period was, that it meant in Attic. I have gone through the passages cited in the Lexicon Homericum, s. v. *οὐ* (an imperfect list, to be sure), and have examined them. Pres. opt. w. *ἀν*, A 271, 301, B 250, Z 129, [141 om.], Θ 210, 444, 517, Ξ 335, Υ 134, [Φ 358 omitted], Ω 297, δ 78, η 293, θ 239, λ 380, π 85, 318, 400, ρ 387, σ 414, τ 107, 348 (falsely recorded 342), υ 135, 322. Aor. opt. with *ἀν*, Γ 66, 223, Δ 223 (falsely recorded 283), Ε 32, 85, Z 522, Θ 21, 451, Κ 204, Ν 289, Ξ 126, 247, Ο 40, Ρ 489, Φ 462, Ω 565, γ 227, δ 347, ε 241, ο 321, ρ 138, 268, 497, υ 392, χ 325, ω 435. The effect of warm, personal negation, so to speak, is the same as in Attic. Whatever restrictive idea is noticeable comes not from *ἀν* but from *γέ* (e. g. Z 129, Φ 358), or from the position of the word to which the restriction applies (e. g. A 271, Ν 289). The aorist preponderates apparently not so much as in Attic, owing to the recurrence of the same verbs, so especially *ἔθλοιμι* (Z 141, Θ 210, Γ 444, Υ 134,

II 318, 400), but still it preponderates, and it is safe to say, as Leo Meyer acknowledges, that the Homeric *οὐκ ἀν* with the opt. has to all intents and purposes reached the ordinary prose usage. However we get at it, through demonstrative, through alternative, if *ἀν* with the negated opt. is equivalent to 'in any case,' we get what must have been essentially the effect. That *ἀν* is preferred to *κέν* with the negative is clear; but if we exclude metrical considerations we must rest content with the tendency of the negative to the stronger of two forms. The negative prefers *ἀν* to *κέν*, as it prefers the total negation of the aorist to the persistent opposition of the present optative. Nor is it unworthy of note that where *ἀν* is repeated in the standard language, it is repeated largely with negatives or equivalents.

B. L. GILDERSLEEVE.

V.—ON A PROBABLE ERROR IN PLUTARCH.

PER. C. 23.

When Clisthenes had succeeded in introducing his reforms in the constitution, his rival Isagoras could hope to overcome him only by invoking the aid of the Spartan King Cleomenes. This aid Cleomenes first rendered by sending a herald and demanding the expulsion of the accursed—*τοὺς ἐναγέας*—that is, the family of the Alcmaeonidae, to which Clisthenes belonged, who were supposed to be tainted with guilt in consequence of the destruction of Cylon and his followers by Megacles, the great-grandfather of Clisthenes. Clisthenes retired at once; and Cleomenes arriving soon after with a small force, found himself master of the city. The senate, however, as constituted by Clisthenes, refused to be dissolved and make way for a new body of three hundred oligarchs whom Cleomenes desired to take charge of the government; and after a short siege Cleomenes and Isagoras were forced to abandon the Acropolis and retire to Sparta. Cleomenes then resolved to invade Attica with a competent force; and summoned allies from the various states of Peloponnesus. At the same time he arranged by negotiation a plan for a simultaneous invasion of Attica by the Boeotians and the Chalcidians of Euboea. As soon as these preparations were made the Peloponnesian force advanced under the command of the two kings, Cleomenes and Demaratus, as far as Eleusis. But Cleomenes had hitherto kept the purpose of the expedition concealed from his Peloponnesian allies. When it came to be known, as there was no unfriendly feeling towards Athens among them, it caused much dissatisfaction; and the Corinthians set the example of withdrawing their contingent. Demaratus too, for some unspecified reason, renounced the undertaking; and these defections caused the whole army to dissolve and return to their homes. But the Boeotians and Chalcidians endeavored to carry out their part of the plan. The Boeotians occupied Oenoe and Hysiae on the Attic frontier near Plataea; and the Chalcidians crossed the Euripus and began to devastate the eastern part of Attica. Invaded thus on all sides, the Athenians at first resolved to concentrate their forces to withstand the

Peloponnesian attack on the side of Eleusis, leaving the Boeotians and Chalcidians to be dealt with later. But as soon as the breaking up of the Peloponnesian army relieved them from danger in that quarter, they marched instantly towards the Euripus, to prevent the junction of the Chalcidians with the Boeotians, intending to attack the Chalcidians first. The rapid arrival, however, of the Boeotians compelled them to alter their scheme; and an engagement was brought on at once, in which the Boeotians were completely defeated, losing 700 prisoners. On the same day the Athenians crossed over to Euboea, and gained another decisive victory over the Chalcidians, taking many prisoners. The date of these events is not quite certain. Thirlwall places them in 508, a writer in Smith's dictionary in 506. Clinton does not mention them at all.

We pass now to the year 445. The Athenian power in continental Greece had just received a fatal blow in the defeat of Tolmides at Coronea. This event, however, increased the reputation of Pericles; as it was well known that he had urged Tolmides to delay his expedition till a larger force could be collected. Grote thus states the circumstances to which attention is directed: "The calamitous consequences of this defeat came upon Athens in thick and rapid succession. The united exiles, having carried their point in Boeotia, proceeded to expel the philo-Athenian government both from Phokis and Lokris, and to carry the flame of revolt into Euboea. To this important island Pericles himself proceeded forthwith; but before he had time to complete the reconquest he was summoned home by news of a still more formidable character. The Megarians had revolted from Athens . . . As if to make the Athenians at once sensible how seriously this disaster affected them, by throwing open the road over Geraneia, Plistoanax, king of Sparta, was announced as already on his march for an invasion of Attica. He did indeed conduct an army, of mixed Lacedaemonians and Peloponnesian allies, into Attica, as far as the neighborhood of Eleusis and the Thriasian plain. He was a very young man, so that a Spartan of mature years, Kleandrides, had been attached to him by the Ephors as adjutant and counsellor. Pericles, it is said, persuaded both the one and the other by means of large bribes to evacuate Attica without advancing to Athens . . . So soon as the Lacedaemonians had retired from Attica, Pericles returned with his forces to Euboea and reconquered the island completely."

It is to be noticed that there are several circumstances of similarity in these two narratives. In each we have Athens compelled to struggle at once with enemies on both sides; in each we have a Peloponnesian army under a Spartan king advancing as far as Eleusis and then retreating without striking a blow; in each we have an expedition against Euboea suddenly arrested in order to meet a more pressing emergency and then resumed with complete success.

Herodotus (V 77) tells us that when the Chalcidians were defeated the Athenians settled four thousand of their own citizens as Kleruchs on the lands of the Chalcidian nobles, who bore the name of *ιπποβόραι*. In speaking of the results of the expedition of Pericles, Thucydides (I 114) says that he reduced the whole island, receiving the submission of the greater part, but driving out the people of Hestiae from their territory and occupying it with Athenian settlers. Plutarch (Per. 23) explains that the reason of this severity to the Hestiaeans was that they had taken an Athenian ship and put the crew to death.

I come now to the point in which I think it probable that Plutarch has made a mistake. After telling us (Per. 23) that Pericles crossed over to Euboea with 50 ships and 5000 hoplites and reduced the cities, he says: "And those of the Chalcidians who were called hippobota, pre-eminent in wealth and reputation, he drove out: Χαλκιδέων μὲν τοὺς ιπποβόρας λεγομένους πλούτῳ καὶ διέη διαφέροντας ἐξέβαλεν. In their accounts of these proceedings Thirlwall, Grote, and Curtius take this statement from Plutarch. Thirlwall indeed uses the expression that these nobles 'were again deprived of their estates,' showing that he bore in mind the account in Herodotus of what had occurred some fifty years previously. But neither Grote nor Curtius makes any reference to the earlier expulsion of these same hippobota. I think it probable that Plutarch was misled by the similarity of the circumstances of the two expeditions which I have pointed out, to join together their results and attribute them to the later expedition of which he gives an account. It may of course be said that in the interval that elapsed between these defeats the nobles of Chalcis had possibly succeeded in regaining their estates and re-establishing their influence. But of this there is no evidence; and it is in the highest degree improbable. The Athenians, we are told, sent 4000 of their own citizens to occupy these lands. We hear of them again as still in possession of them at the time of the battle of Marathon in

490. Herodotus (VI 100) tells us that before Datis and Artaphernes reached Euboea, the people of Eretria, knowing that they were to be attacked, sent to Athens and begged for assistance. The Athenians, we are told, did not reject their petition, but assigned as their auxiliaries the 4000 who as cleruchs were occupying the lands of the Chalcidian hippobotae. But these men found that owing to internal divisions and probable treason the Eretrians had no chance of successfully resisting the Persians—*τῶν Ἐρετρίων ἡνὶς ἄρα οὐδὲν ἴγιες βούλευμα*—and accordingly they acted on the advice of a certain Aeschines, *ἐών τῶν Ἐρετρίων τὰ πρότα*, and crossed over to Oropus and so saved themselves. The Persians took Eretria by treason, carried off the inhabitants, and without spending more time in Euboea went at once to the plain of Marathon. Of course one may believe, if he chooses, that these Athenian cleruchs did not return, after the defeat of the Persians, to their estates, which they had been occupying for some sixteen or eighteen years. But this seems to me exceedingly unlikely. We are not told that the Persians in any way devastated the territory of Chalcis during their stay in Euboea; and there could have been no reason why the Athenian settlers should not return to their farms as soon as the danger of the Persian invasion was past. Boeckh (Publ. Ec. I, p. 557; E. T., p. 548) speaks of the retreat of these cleruchs before the battle of Marathon—to Athens, he says; but Herodotus says to Oropus—and is convinced that they returned and resumed possession of their lands. It is true that on the same page he says, following the statement of Plutarch, that hippobotae were again found by Pericles in Chalcis and expelled by him. But he does not attempt to show how, if, as he believes, the Athenian cleruchs were still in possession of their lands, there could have been room for another set of hippobotae to exist there of sufficient importance to be specially mentioned as dispossessed. During the whole period intervening between the battle of Marathon and the defeat of Tolmides at Coronea the Athenian power had been steadily augmenting; and it is hard to believe that, when such a large body of Athenian citizens was permanently settled presumably on the best lands of the Lelantian plain, any considerable number of the old nobility could have succeeded in establishing themselves. When we add to this inherent improbability the silence of Thucydides as to any such expulsion of hippobotae, the probability is greatly increased that Plutarch has fallen into an error, perhaps led to it in the way I have suggested. Indeed the words

of Thucydides have more weight than is due to simple silence. For he says *τὴν μὲν ἀλλην ὄμολογία κατεστήσαντο Ἐστιαιᾶς δὲ ἐξοικίσαντες αὐτοὶ τὴν γῆν ἔσχον*. These words imply that the only part of the island treated with exceptional severity was the district of Hestiae. If Thucydides had been aware of any such expulsion of the landholding class from Chalcis, as our historians assume on the authority of that passage of Plutarch, I do not think he could have expressed himself in this way.¹

C. D. MORRIS.

¹ The conclusion arrived at above is strongly confirmed by the opening words of the inscription (C. I. A. 1 Suppl. p. 10, Hicks p. 33) which records the arrangements made by the Athenians with the Chalcidians immediately after the reduction of Euboea by Pericles. The Athenian *βινδή* and *δικαισται* are to swear—οὐκ ἐξελῶ Χαλκιδέας ἐχ Χαλκίδος οὐδὲ τὴν πόλιν ἀνάστατον ποιήσω. This decree would be an intolerable mockery if, just before it was passed, the most eminent class of the Chalcidians had been expelled.

NOTES.

A PECULIARITY OF KELTIC (IRISH) RITUAL.

In a previous article entitled *Keltic and Germanic* (see Journal I 442) I took the liberty of saying: "One example of specifically Irish usages occurs in the *Leabhar Breac*. The MS was written in the XIVth century, according to O'Curry; but the contents are of high antiquity. They are chiefly tracts on ecclesiastical subjects. Among others is a commentary on the canon of the mass, in which the commentator evidently presupposes a commingling of the elements in the chalice by pouring the wine upon the water. This is reversing the usual process, and the monkish symbolic interpretation put upon it is that the blood of Christ, the higher and more precious element, came down from above to the lower and grosser element of man and the world. Smith's Dictionary of Christian Antiquities (*sub* 'Elements') mentions no instance of pouring the wine on the water."

The above statement was advanced by me at that time with some misgivings. Not having the text of the *Leabhar Breac* at hand, I was trusting to my recollections of what Mr. Hennessy had said to me one afternoon in the library of the R. I. A.; and unrecorded recollections, as every one knows, are anything but infallible. The latest number of Kuhn's *Zeitschrift*, XXVI, Heft 5, pp. 497-519, contains an article by Whitley Stokes, which throws much light on this very subject, and seems to corroborate my once hazardous statement. The article is upon the Irish passages in the Stowe Missal. In it Mr. Stokes gives the text, with translation and notes, of an Irish tract on the ceremonies of the mass, which Mr. Warren has omitted from his edition of the Latin part of the Stowe Missal in his *Liturgy and Ritual of the Celtic Church*, Oxford, 1881, p. 199. Mr. Stokes gives also the text and translation of the *Leabhar Breac* treatise.

The translation of the Stowe-Missal treatise runs thus:

"The Altar is the figure of the persecution which causes them [*scil.* the Christians] sufferings.

"The Chalice, it is the figure of the Church which was set and founded on the persecution and on the martyrdom of the prophets and others.

"Water, first, into the chalice, and this is chanted thereat: *Peto te Pater, deprecor te Fili, obsecro te Spiritus Sancte*, to-wit, the figure of the people that was poured forth into the Church.

"The Host, then, upon the altar, to-wit, the turtle-dove. This is chanted thereat, to-wit, *Jesus Christus, Alpha et Omega, hoc est principium et finis*. A figure of Christ's body which was set in the linen sheet of Mary's womb.

"Wine then for water into the chalice, to-wit, Christ's Godhead or his Manhood, and for the people at the time of (His) begetting; this is chanted thereat, *Remittit Pater, indulget Filius, miseretur Spiritus Sanctus*," etc., etc.

It has seemed to me advisable to give the passage entire, for the sake of clearness, although the precise point involved is contained in the fifth clause, that beginning with "Wine then for water," etc., etc.

Mr. Stokes renders the Irish *fin iarum arhuisque hicælech* (which in normal spelling would be *ar uisce i caeblech*) by "wine then *for* water into the chalice." This rendering is not acceptable, for the reason that it fails to bring out the author's evident meaning. In the first clause, the altar is made to symbolize persecution. Then the chalice is made to stand for the Church as a divine organization. Third, the water poured into the chalice symbolizes mankind gathered into the Church. Next, the host symbolizes Christ's body in the womb. And finally the pouring of wine *upon* the water signifies the divine nature of Christ *added* to humanity. I do not see how we can help rendering the Irish preposition *ar* in this context by "upon." True, the usual meaning of *ar* in Old and Middle Irish is "for, before." Thus Windisch, in the dictionary to his Texts, p. 368, renders it by *vor, für, wegen*; *ante, præ, pro, propter*. But, p. 370 under No. 4, he gives several phrases in which *ar* has the force of the German *zu, hinzu*, "in addition to," e. g. *déc ar mili = 1012*, word for word in Latin *decem ad mille*, and *a cach ar cach ló* (láthe), "from each to each day," i. e. from day to day. There is, therefore, some lexical warrant for treating *ar* in our passage as "to," and thus letting the author inculcate good Catholic doctrine, however extravagant his symbolism may sound to us. If we adopt Mr. Stokes's rendering, we shall have to imagine the water as poured out of the chalice to make

way for the wine, *i. e.* the elect turned out of the Church, and Christ's humanity supplanted by his divinity!

Concerning the Leabhar-Breac treatise, it will be only necessary to remark that it corresponds very closely to the former, so closely in fact as to imply some direct connection between the two. And, in this particular passage, the wording is identical; the Leabhar Breac merely adding the definite article *ar in usce*, "for (?) *the* water."

—
J. M. HART.

THE DIALECT OF ASSOS.

Until the past summer the excavations at Assos have brought to light no inscriptions composed in any but the common dialect. Recently, however, there have been found several older bits containing specimens of the language of the country. This turns out, as might have been expected, to be nothing else than the Aeolic of Lesbos. A brief notice of these inscriptions, in advance of their publication in the papers of the Archaeological Society, may not be out of place here. The longest reads as follows:

... ἔξ (?) ὃ σκείεά ἔσσι δαμόσια ἐπὶ ἀγορανόμω Μεγιστία Σω[γ]ενε[ι]ω· ἡμιμέδιμνοι χάλκιοι τρεῖς, [η]μίεκτα ἔννεα, διχοίνικα δέ[κ]α, χοίνικες ἔπτα, τρίχοα [χ]άλκια τέσσαρα, ἡμίχοον, ἀλ[λο τρ]ίχοον χώναν ἔχον. στά[θμα χά]λκι[α]· τάλαντα τρί[α . . . π]εντάμναο[ν, . . .]

Especially interesting is the form *ἔσσι* for *εἰσι*; this throws light on a doubtful point (see Meister, Griech. Dial. i, p. 171, note 2), and is to be restored (instead of *ἔντι* or *εἰσι*) for the impossible ΕΣΤΙ in Conze's long inscription of Eresos.

Two fragments, with only parts of lines, contain the characteristic forms *στράγοι*, *τᾶς βόλλας*, 'Ανόδικος Κλεοκράτ[εος]', *ἀπέδωκαν*, *ἀγρεόμενοι*, . . . *αχον* 'Ανοδίκει[ον]', *ἀγγελλάτω*, *ψάφισμα*; datives in *-οισι*, accusatives in *-οις*, etc.

Of a number of brief epitaphs I note these: 'Αλέκτρα Λαριχεία, 'Ασίννω 'Ανοδικεία, 'Αϊκλείδας Λαρίχω, Λάριχος 'Αϊκλείδα, 'Αμεννάμενος Λαρίχω, 'Αδέα 'Ηροΐδα.

The name 'Ανόδικος¹ (= Πραξιδικος?) is a new one, and seems to

¹ 'Ανόδικος = 'Αναξίδικος would be tempting if it were not for the *o* in 'Ανο. So 'Ανακλήσ runs with 'Αναξικλής rather than 'Ανάκλητος to which it is usually referred. 'Αναγόρα, the name of one of Sappho's friends (Suidas), has been crowded out by the 'Ανακτορία of Maximus Tyrius (see Swinburne's 'Anactoria'), but 'Αναγόρα = 'Αναξαγόρα would have its masculine in 'Αναξαγόρας. 'Ανακρέων, if compounded with ἀνά, 'up,' would be the only one of its group to be so compounded according to Fick (Personennamen, s. 121). Βασιλοδίκα, which is found C. I. G. 2448, 3, is a fellow to 'Αναξιδίκη.

B. L. G.

have been a favorite in Assos. *'Αμεννάμενος* (that is *'Αμεινάμενος*) and *'Αἴκλείδας* are also new, if I am not mistaken. Lesbian inscriptions have *αι* for *αι*. Observe also the patronymic adjectives in *-ειος*.

FREDERIC D. ALLEN.

“OCCLUDE.”

Our American dictionaries without exception, I think, give the verb “*occlude*” as an obsolete word, citing no later example of its use than the writings of Sir Thomas Browne. Upon turning to Calhoun’s Speeches, Vol. II, p. 105 (1814), I read: “There was scarcely a port in Europe, which at the beginning of our restrictive system, was not *occluded* to British commerce.”

HENRY E. SHEPHERD.

REVIEWS AND BOOK NOTICES.

Die Akkadische Sprache: Vortrag gehalten auf dem fünften internationalen Orientalisten-Congresse in Berlin, von PAUL HAUPT, mit dem Keilschrifttexte des fünfspaltigen Vocabulars K. 4225, so wie zweier Fragmente der babylonischen Sintflutherzählung, und einem Anhange von O. DONNER über die Verwandtschaft des Sumerisch-Akkadischen mit den ural-altaischen Sprachen. Berlin: Asher u. Co. 1883.

Dr. Haupt's earlier works on the pre-Semitic language of Chaldaea were written chiefly for cuneiformists. His paper, read before the Oriental Congress of 1881, presented the results of Akkadian research in a succinct and popular form, and was intended for linguists generally. It is now reprinted separately, with important additions that are indicated in the title, and with many further notes and references. A review of this essay will be more intelligible after a brief survey of the other works of the author upon which this is largely based.

Akkadian studies were first set upon a sure footing by the publication in 1879 of Dr. Haupt's "Sumerische Familiengesetze," a work which contained at the same time the best contribution yet made to the comparative phonology of the Semitic languages on the basis of an analysis of the Assyrian forms occurring in the bilingual texts cited in the book.¹ Here for the first time a true scientific method was employed, every reading of an Akkadian sign or sign-group, and every proposed rendering being rigorously verified from the vocabularies of the Assyrian scholars themselves, or from the coherent texts. Thus the field was marked out plainly once for all, and it is a proof of the sureness of Dr. Haupt's methods and the accuracy of his deductions that, after more than three years of continued work and progress, very little that was stated for the first time in the "Familiengesetze" stands in need of correction.

The next most important advance in this young science was the fixing of the two main dialects of the Proto-Chaldaean language. Sayce and Lenormant had already divined that the first two columns in the so-called "Trilingual Tablet" in II Rawl. 31 represented not two different languages, but divergent forms of the same language. The detailed evidence of relationship, however, and the proof that the new dialect was much more than a mere local variation, were given by Dr. Haupt in his paper published in the *Götting. Nachrichten* in Nov. 1880: "Ueber einen Dialekt der sumerischen Sprache." In this paper the leading phonetic changes were formulated and verified, and at the same time a list was given of the coherent texts published in the fourth volume of the "Cuneiform Inscriptions," which were composed in the two dialects respectively.

The author's next work, "Akkadische und sumerische Keilschrifttexte" (autographed in 4to), is the most elaborate and important he has yet published.

¹ The Assyrian portion of this work has already been noticed in this Journal by Prof. Francis Brown in his article, "Recent work in Assyriology," Vol. II, p. 227.

The first three parts appeared in 1881. Part I is introductory, containing a "Schrifttafel" of Assyrian syllabic values, a "Zeichensammlung" of 887 ideograms with their Akkadian and Assyrian cuneiform interpretation, an Akkado-Assyrian, and a Sumero-Akkado-Assyrian cuneiform vocabulary. Parts II and III contain a selection of Akkadian and Sumerian texts respectively, edited with scrupulous accuracy, and many of them published for the first time. Part IV appeared in the spring of 1882; it contains an outline of Akkadian grammar, an Akkadian glossary, with notes upon the "Schrifttafel" and upon a part of the "Zeichensammlung." The fifth and last part will complete the proof passages for the "Zeichensammlung" and the vocabularies, and explain some of the more difficult passages in the texts. It is announced to appear shortly. This great work, which stands upon the highest level yet reached by Assyriological scholarship, is an invaluable repository of facts and data, and will probably always remain the sure foundation of Akkadian philology.

After these successive discoveries and publications, Dr. Haupt feels himself justified in calling the attention of philologists generally to the peculiarities of this important language. It will only be possible here to refer to those points which seem to be of the greatest importance for linguistic science.

The pre-Semitic language of Babylonia seems to have had two main literary dialects. Only two, at least, have been recognized in the documents that have come down to us. The names given to these are taken from the twofold division of the country indicated in the ordinary Assyrian appellation "Shumer (the Biblical Shinar) and Akkad." Before the dialects were definitely fixed, the term Akkadian was generally applied to the language in England and France, and the term Sumerian in Germany. Since that scientific event most scholars have followed Dr. Haupt in regarding the main dialect, or that in which most of the vocabularies and coherent texts are written, as the language of "Akkad" or Upper Babylonia, and the special idiom indicated by the technical term *eme sal*, or "Woman's Language," in the so-called "Trilingual Lists," as that of Shumer or Lower Babylonia.¹ Provisionally, it will perhaps be best to designate the whole language as Akkadian, after the main dialect; but it is unfortunate that no name has been generally adopted that would be perfectly unambiguous.

Some of the phonetic changes that mark the dialects are peculiarly interesting. For example, a Sumerian *m* appears as *g* in many corresponding Akkadian words. This is to be explained from the fact that *m* in Akkadian generally tended to the sound of *v* and was later so pronounced, and then we have the same change as that which is so striking in Persian and in the Romanic form

¹ It should be observed that the opposite view is stoutly maintained by the Munich Assyriologist, Fritz Hommel, who holds that the main dialect was spoken in Lower Babylonia and should therefore be called Sumerian, while the other dialect was the idiom of Upper Babylonia, and is therefore the true Akkadian. This theory he has advocated in various journals, and has finally maintained systematically in his work just issued, "Die vorsemitischen Culturen in Aegypten und Babylonien," Leipzig, 1883, p. 290 ff. His ingenious arguments can hardly be regarded as decisive, since the geographical references in the respective texts yet published are too meagre to base a sure inference upon. The final settlement of the question, however, as viewed from all sides, cannot long be delayed.

As to the general character of the literature of the two dialects respectively, it may be noted that the Akkadian documents, or those of the main dialect, abound in incantations and magical formulae, while the Sumerian consist chiefly of penitential psalms and prayers, unequalled for depth of religious feeling by anything in recorded ancient experience outside of the Bible.

of certain Teutonic words (*e. g. wise: guise*). Sumerian *b* between vowels also becomes *g* in Akkadian, showing that there it too had the sound of *v*. The vowel *e* also appears regularly in some Sumerian words in which we find *u* in Akkadian. Other changes are more sporadic, such as that of Sum. *d* to Akk. *g*, of *l* to *n*, and the startling but sufficiently attested correspondence between Sum. *ʃ* and Akk. *n*. It should further be noticed that the changes of some sounds are not quite constant. Sumerian *ʃ* becomes *z* in at least one clear case (Sum. *ši* "life" = Akk. *zi*); and Sumerian *e* sometimes appears in Akkadian as *a* instead of *u*. For example, the three forms *ma*, *me*, *mu* all mean "to speak." Dr. Haupt regards *ma* or *ma* in this case as the original form, from which, on the one side, *mu* arose through **mo*, and, on the other, *me* was differentiated. But it is perhaps somewhat hazardous to attempt the solution of Akkadian vocalic problems until something is known of the accentuation, which must have played a great part in the determination of vowel sounds in this simple and primitive type of language, since the same influence is now being proved to have controlled the vocalism even of Indo-European. Consonantal changes are perhaps more amenable to treatment; but even here there is evidently much that is puzzling. It may be expected, however, that the discovery of many more new texts in both dialects will enlarge our means of studying some of the most interesting problems of comparative phonology. The differences between the two dialects are not radical, they are phonetic and syntactical rather than formal, and their divergence is apt to be exaggerated from the difference in the modes of writing them. The Assyrian scholars in copying from Sumerian originals, which as well as the Akk. texts were written ideographically, were obliged to indicate to their contemporaries the Sum. pronunciation of those words that varied from the Akk. standard by writing them phonetically,¹ and thus the general appearance of a Sum. text differs strikingly from that of the more common Akk. documents.

The Sumero-Akkadian is tolerably rich in sounds. The vowels are *a*, *i*, *e*, *u*, which had probably both long and short values. It is also rich in sibilants, had simple *l* and *r* and the Arabic *gh*. The hard sounds *k*, *t*, *p*, *s* were not permitted at the end of words, and *r* was very rare at the beginning.

The structural type is agglutination of the simplest kind. The "roots," or rather the undetermined words, were perhaps originally monosyllabic. Nearly all, at least, are of but one syllable now, and the few dissyllables and trisyllables are clearly secondaries. In the monosyllabic simple words concurrent consonants are not admitted, and thus the language is singularly melodious. Vowel-harmony also prevails in certain combinations, but is not thoroughgoing.

As in all other languages there was originally no distinction in *form* between the noun and the verb. This is proved by the fact that they exist in precisely the same forms with precisely the same adjuncts, only that in later times a distinction was made by putting personal signs before the verb, while pronominal suffixes of nouns remained at the end. In the Sumerian dialect, however, which bears in general the stamp of greater antiquity, there is a postpositive conjuga-

¹ A common example will make this clearer. Akk. *dinger*, "God" = Sum. *dimmer*. In transcribing an ordinary Akk. text an ideogram for "God" would be read *dingier*. If the ideogram were used in a copy of a Sum. text it might be read in the same way, and so the scribes wrote out the Sum. word in syllable signs: *dim-me-ir*, to preclude mistakes.

tion, so that, for example, the same combination¹ might mean "his speech," "this speech," "he spoke." The differences in meaning were of course indicated by the accentuation, which is unknown to us.

For derivative nouns there are special prefixes, forming nouns of action, generalized terms, abstracts and *nomina loci*. There are also adjuncts to express different uses (*quasi voices*) of the verb, most of which are also prefixed. A "root," whether used as noun, verb, or adjective, may also be reduplicated to mark repetition or intensity, yielding plurals, collectives, frequentatives, or superlatives. The noun has no distinction of gender, number, or case, though *sal*, the ideogram for "female," is sometimes added to mark the feminine. The plural suffix *ene* occurs only with names of gods and demons. The genitive relation is indicated by suffixed particles which were originally locative nouns, and the dative by suffixed *ra*, originally a verb-noun "go."

In the verb there are two tenses, a present and an imperfect, the latter being the earlier, as in the Semitic languages. So the "root" without change stands for the imperfect, while the present either reduplicates it or adds *e*. The plural of the imperfect is indicated by an appended *es*, while the present for the same purpose adds *ne* or *nes*, the latter being itself the plural of the substantive verb *me*.²

The pronominal object is regularly *incorporated* between the personal sign and the "root." The subject and object stand before the verb, but the object is usually represented again by an incorporated pronoun. The adjective constantly follows its noun; but there is evidence to show that this order, like that of the prepositive (ordinary) conjugation, is the reverse of the original. In some compound ideograms, for example, the attributive sign comes first.

The following phrase (IV R. 4, 1-4b; cf. *Familiengesetze*, p. 57, n. 4) will give a general notion of the structure of an Akkadian sentence:

g'u-dim ki-damalā-šu'ga-ba-nib-RIRI šu'-saga-dingerāna-šu'gen-šin-gigi (—"bird-like place-wide-to may-he-him-flee hands-gracious-his-god-to may-he-them-return"): "Like a bird to a wide place may he flee to him; into the gracious hands of his god may he (into them) return."

Of the two autographed cuneiform documents prefixed to the work, general interest will attach to the new fragments of the Babylonian story of the Flood, which were discovered by Dr. Haupt in the British Museum in May, 1882. They are here accompanied by a translation (p. xli f.). They belong to the first column in IV R. 51, and are an important addition to the already published text, showing more clearly than ever that the last fragment published in col. I does not belong to this version of the Deluge story at all. The publication and explanation of these difficult fragments serve to supplement the translation (with transcription, commentary, and vocabulary) of the whole of the Deluge story made by Dr. Haupt for the second edition, just issued, of Schrader's "Keilinschriften und das Alte Testament." It is announced, moreover, on the cover of the work before us that Dr. Haupt has also in preparation an edition

¹ In this combination *dugā-ba*, *dug* is the "root," *ā* the "vowel of prolongation," and *ba* the "pronominal element."

² Cf. *Familiengesetze*, p. 31: *me* meant properly "to name" ("speak") or "have a name." To the ancient Akkadians, then, an object only *existed* when it had a *name*. This is just what a sound philosophy of speech leads us to expect.

of all the fragments yet discovered of the great Nimrod Epos, to be treated in the same way as he has already treated the Deluge story, and that his "Outlines of Assyrian Grammar" will soon be published, written in English.

Appended to the treatise under review are a few specimens of Akkadian composition which cannot fail to awaken a deep literary as well as scientific interest. They suggest the importance of that literature of pre-Semitic Babylonia which, even as it is imperfectly represented in the discoveries hitherto made, furnishes the key to the whole civilization of Western Asia. Akkadian studies may, in fact, now be said to be directly or indirectly indispensable to the historian of human culture as well as to the comparative linguist. To the Semitic student, indeed, some knowledge of Akkadian is absolutely necessary, to enable him to trace the history of many of the most common and important terms in his whole vocabulary; and the proof is almost complete that the primitive Semites before their separation must have long had at least the most intimate contact with the Sumero-Akkadian people. But many words also which have become the common property of the civilized world, must be traced to the same source. The names Euphrates and Tigris, for example, are no longer a puzzle, but are clearly Akkadian appellatives.¹ The modern words *cane*, *canon*, *canal* go back through the Phoenician *kaneh* to the Akkadian *gin* "a reed," from the root *gin* (*gi*) "to bend."² But we owe to the pre-Semitic Babylonians something more than familiar words with the ideas they stand for in the history of civilization. Whole sciences that have dominated the thought of men and changed the face of the world, are found to have had their beginnings and an astonishing development among these gifted and reflective people, before as well as after their amalgamation with the conquering Semites. For the comparative history of religion this new science is perhaps of the most significance, and it will be one of the most interesting and important problems of the future to trace the influence exerted upon still surviving faiths by the devout seers and psalmists of Sumer and Akkad.

The appendix by Prof. Donner is noteworthy chiefly because it will probably remain the last word upon the much-vexed question of the affinity of the Sumero-Akkadian and the Ural-Altaic idioms. During the earlier days of Akkadian research it was the fashion to regard Akkadian as an early representative of the Ural-Altaic. Dr. Haupt combated this theory in the *Familiengesetze*, and the careful review here given by the eminent Ural-Altaic specialist completely substantiates the opinion there expressed. The points hitherto relied upon to establish relationship are the vowel harmony that appears to a limited extent in Akkadian, and a similarity in certain postpositions and pronouns, as well, of course, as the agglutinative character of the two systems. Now that so many of the former readings and hypothetical Akkadian forms have been shown to be fanciful, the points of resemblance are seen to be fewer; but even if the old word and form lists had remained sure, the theory of relationship would probably not have held its ground. The wider our knowledge of languages becomes, the clearer it appears that agglutination and even vowel-harmony are not the exclusive characteristics of one family of speech or even of a few, but are rather types of expression which are found in all quarters of the earth; and the list of homo-

¹ Friedrich Delitzsch, *Wo lag das Paradies?* p. 169 ff.

² Cf. Hommel, *et c. p. 407 f.*

phonous postpositions has never been large enough for a safe induction in favor of affinity. The positive value of Prof. Donner's contribution lies mainly in the parallel illustrations he has given of the structural features of the Akkadian, drawn not merely from the Tartaric and Finnish languages, but also from various idioms of Africa, Polynesia, and southern Asia.

Two errors in the book, due to oversight, should be pointed out. On p. 11, line 5, *šu* should be read for *š*. In the Akkadian sentences, given in cuneiform characters, there should be inserted on p. 279, line 4, between *ta* and *munna*, the ideogram for *dingera gale* "great God."

J. F. McC.

Cyprian von Antiochien u. die deutsche Faustsage. THEODOR ZAHN. Erlangen : Deichert, 1882. Pp. iv, 153.

The need most sorely felt by all students of medieval literature is that of a comprehensive treatise upon the formation of Christian imaginative literature—to speak more in the concrete, upon the lives of the saints, and the Christian apocrypha. Edward Schröder, in his admirable review of Horstmann's *Altengl. Legenden, Neue Folge*, in the *Anz. f. d. Alterth.* VIII, p. 101 sqq., has laid down very plainly the lines upon which such a treatise should be planned. Profiting by the researches and generalizations contained in Rohde's *Der griechische Roman u. seine Vorläufer*, he has shown that the apocryphal Gospels, the Clementine Recognitions, and the early lives of the saints borrowed their literary form and structure, their style, their atmosphere, and many even of their incidents, from the late Greek prose romances of the neo-Platonic school. The wide reading and clear thinking that he has compressed here into eight or nine pages are truly remarkable. I can but express the wish that Schröder may find the opportunity of expanding these few pages into a treatise of as many hundred, thereby enabling us to survey the entire field of Christian imaginative literature from the second to the seventh century. This work once done, we shall the better understand the later medieval literature of the several European countries, and learn to separate what is distinctively Germanic or Keltic from what is due to the infiltration of Greco-Oriental themes and forms.

Meanwhile the next best gift that one can offer us is an exhaustive monograph upon the growth of some one legend in particular. This Zahn has undertaken in the present work. The only general fault that I can find in it is its occasional prolixity. Perhaps also the arrangement of topics might be improved. I should have liked it better, had the author begun with his translation of the Cyprian legend, and deferred his analysis of Calderon's *Mágico*, and his remarks upon the Simon Magus tradition and the Empress Eudocia's version of Cyprian, to Section IV. By adopting such an arrangement he would have avoided much repetition.

In itself the Cyprian legend is both striking and attractive; and it is additionally interesting to us in having furnished the subject for Calderon's well-known drama *El Mágico Prodigioso*, and in presenting many points of resemblance to the still more celebrated Faust legend. Zahn cannot be praised too highly for translating entire the three books of the *Vita Cypriani et Justinae*. Few of us have the time or the patience to struggle through page after page of

monkish Latin or Greek, even if we are so lucky as to have access to the original texts; and no abstract of a story, however carefully made, will fill the place of the story itself. By way of appendix, Zahn has published, for the first time, the Greek text of Book I.

The story of Cyprian and Justina, in the final shape in which it was current in the middle ages, is divided into three books. The first tells of the magician Cyprian, and his unsuccessful attempts upon the virtue of Justina. In the second, Cyprian makes to the church a full confession of his magic arts and crimes, and implores forgiveness and spiritual guidance. Book third tells how Cyprian was eventually made bishop, and together with Justina suffered martyrdom for the faith. The first point that Zahn establishes is that all three books can not possibly be by the same author. Book second, or the Confession, stands by itself, is unmistakably different in style and character, whereas the first and third books are closely united; probably the writer of book III revised an earlier (now lost) version of book I and united the two. At any rate the story usually known in the early middle ages was that contained in these books I and III. The incorporation of book II in Latin MSS did not take place before the ninth century. What complicates the matter is the circumstance that Gregory of Nazianzus delivered, 379 A. D. (in Constantinople, as Zahn assumes) an oration upon Cyprian the saint and martyr which does not agree with our legend. The oration is evidently a panegyric upon the historic Cyprian of Carthage who suffered martyrdom in 258 A. D. The legend, on the contrary, makes Cyprian bishop of Antioch. This discrepancy is so glaring that we have to assume that Gregory could not have known the story which is told in books I and III. Yet he must have read either book II or some composition very much like it; possibly also something like, but not identical with, book I. How are we to account for the strange confusion of Antioch and Carthage, and the still stranger adornment of a well-known bishop with all the crimes and extravagances of a love-sick magician?¹ Zahn's hypothesis is ingenious, and—so far as I am a judge in such matters—satisfactory. It turns upon two points. First, that a local tradition of some pagan thaumaturgus who gave the early Christians much trouble, but was at last converted and received into the church, may have sprung up in or near Antioch. This thaumaturgus, whether originally named Cyprian or otherwise, never became bishop, never suffered martyrdom, consequently never attained to the distinction of a place on the calendar of saints. Saint's day, martyrdom, and the episcopal rank were the attributes of the historic Cyprian of Carthage, and the legend as we have it is, like so many other legends, the blending of history with local superstition.

Cyprian the magician (in distinction from the bishop) bears some resemblance to the Simon Magus of Cyprus who, according to Josephus, was employed by Felix to win the love of Drusilla. Zahn is disposed to recognize in the name Cyprian a word-formation from Cyprus. But there is a marked difference between Simon Magus of Cyprus (also the Simon Magus who figures in the book of Acts) and Cyprian. The two Simons are either Jews or Samaritans. Cyprian is a pagan. In fact he represents paganism in its final struggle with

¹ In Book II (Confession) Cyprian admits that he himself fell in love with the maiden whom he was seeking to gain for Aglaidas. Zahn, p. 42. The same trait occurs in Calderon's *Magico*, Zahn, p. 4.

Christianity. His combination of philosophy and magic savors strongly of the neo-Platonism of Iamblichus. The underlying conception that he has attained his pre-eminence solely through the agency of the devil is, of course, not a neo-Platonic conception, but is the verdict of Christian condemnation. In the Cyprian legend, for the first time, we find broadly and clearly developed a Jewish-Christian belief which was subsequently to figure in all European literature, to wit, that a man could enter into a covenant with the devil, whereby the devil was to help him in obtaining all things in this life, and to receive him at death into the nether-world as a faithful servant and prince. Also that man and the devil might enter into a *sworn* covenant for a specific object. Finally, that even such a sworn covenant might be broken, with the help of God and the church. In the book of Confession the faithful reply to Cyprian that he may hope for pardon, inasmuch as he did everything in ignorance of the true faith.

Even this meagre outline of Zahn's argument will suggest to the reader the bearings of the Cyprian legend. We find the same conception underlying the story of Mary of Antioch and Anthemios, the story of the servant of Proterios, and in the story of Theophilus; not to speak of the influence of the Cyprian legend upon the legend of Margaret (Marina-Pelagia).

In the story of Mary of Antioch we read that Anthemios, who is already a Christian, falling in love with Mary, resorts to magic to win her. He even abjures Christ in writing, but is saved. In the story of the servant of Proterios the lover wins the maiden, after having made a written pact with the devil. Examples like these before us, we shall be prepared to agree with Zahn that the Theophilus legend is of no value. As Zahn observes trenchantly, the Theophilus legend is not an *old* legend, but comparatively late, and can not possibly be the original of Faustus. Not even the written pact with the devil is peculiar to it. Henceforth all commentators upon the Faust legend and upon Marlowe and Goethe will have to abandon Theophilus. Nevertheless the fact will still remain, that the use of blood in signing the pact with the devil, *e.g.* in Goethe's *Faust*, is to be traced to Rutebeouf's *Théophile*.

Whether Zahn is warranted in looking upon Cyprian as the immediate original of Faustus may be questioned. The reviewer (Zarncke himself?) in the *Lit. Cent. Bl.* 1882, p. 716, rejects unqualifiedly all connection between the two. This, it seems to me, is going to the opposite extreme. The investigation will be much simplified if we lay aside at the outset all conceptions peculiar to Goethe's *Faust*, and restrict ourselves to the Faustus of the 16th century. Conceding that there was a historic personage of that name, known to Luther and Melanthon, may not the popular report of him, handed down to us in the *Faust* book, be the work of a writer who was familiar with the Cyprian legend and borrowed from it freely? Assuredly, in view of the facts adduced by Zahn pp. 11, 12, no one can venture to call the *Faust* book a *Volkssage*. In it Simon Magus and Helena are coupled together, and Helena, the phantom Helena of late Greek tradition, figures in the Clementine Recognitions, where also we find the names of Faustus, Faustinus, and Faustinianus. The author of the *Faust* book must have known something, however confusedly, of these early Christian superstitions. We can not, therefore, look upon Helena and Faustus as "inventions" of the 16th century, much less upon the legend itself as distinctively Protestant. The story is an old one, only the moral is changed.

Zahn has left undiscussed one feature of the Cyprian legend upon which I could wish much more light. The "action" of book I is as follows: A wealthy young man, name Aglaïdas, falls in love with Justina, who repulses his advances, replying that she is the "bride of Christ." Aglaïdas tries to carry her off by force. Baffled in this, he has recourse to the renowned magician Cyprian. The latter calls upon a "demon," who wishes to know why he is summoned. Cyprian tells him what is expected of him, and, to make sure of his capacities, inquires what he has already done. The demon answers: "I have abjured God. I have shaken the heavens and dragged down the angels from above. Eve I seduced, and I robbed Adam of paradise. Cain I taught to murder his brother. Thorns and thistles have sprung up for me. I established theatres and processions, adultery, and idolatry. I taught the children of Israel to make (golden) calves, and prompted to the crucifixion of Christ." But, despite all this boasting, the demon is baffled by Justina. Thereupon Cyprian calls up a second demon, still mightier. He also is baffled, and so in turn a third. This trait of a boasting enumeration of evil deeds we find in two other legends, which, like Justina, have for their object the laudation of perpetual virginity—namely, the legends of St. Juliana and St. Margaret. In both these legends a devil appears to the saint in prison, is overcome there by her, and thereupon is made to confess his wickednesses. The confessions resemble strongly in form and also in substance the boasting of Cyprian's demon.¹ In a third legend, that of St. Katharine, intimately allied with the other two, no such demon appears. Zahn makes it evident, p. 110-114, that the prototype of all such saints as Justina, Katharine, Margaret, etc., is to be found in Thecla of Iconium. The Thecla legend is among the very earliest, dating from the end of the first or beginning of the second century. It is undoubtedly the simplest and most primitive conception of virginal purity. It is free from the superheated rhetoric that mars later legends of a like character, and is also free from devils and witchcraft. The question, then, naturally arises: whence this (foreign) element in Juliana and Margaret? Is there any connection between them and Cyprian-Justina? Has one set of stories borrowed from the other, or is there a source common to both, and where are we to look for such a source? I propound a number of queries without being able to answer one of them. Yet I can not help suspecting that all the demonology in the secondary layer of Christian literature is a borrowing from Greek, possibly here and there from Syrian superstition. At any rate, the reader will perceive how impossible it is to progress safely in the study of Christian literature until we first establish certain *points de repère*.

J. M. HART.

A Grammar of the Homeric Dialect, by D. B. MONRO. Oxford: Clarendon Press. 1882. 8vo. pp. XXIV, 344.

Monro's grammar is on an entirely different plan from Ahrens's *Formenlehre*, with which our author in his preface virtually compares his work. It is not merely that Ahrens's grammar is old and treated only of the Homeric inflections. Ahrens's work was paedagogic quite as much as scientific; it was intended for

¹ See Einenkel's pamphlet, *Ueber die Verfasser einiger neuangelsächsischer Schriften*, Leipzig, 1881, and its conclusion in the *Anglia*, V 91.

use in elementary instruction as well as to serve as a foundation for the historical, scientific treatment of Greek grammar. He distinctly claimed that it was not to be judged by a scientific standard. Thus, even in his second edition, Göttingen 1869, he gives without qualification the old view (which has been handed down by tradition to this day in most of our preparatory schools) of the *distraction* of contract verbs, explaining *δράαν* as formed by prefixing a short *α* to the second vowel of *δράν*, which was formed by contraction from *δράειν*. The work before us, on the other hand, is not meant for elementary instruction, although many a teacher will be so delighted with the clearness and completeness of many of the statistics and explanations that he will be tempted to give them to classes which are not ready for such "strong meat." Monro does not allow paedagogic scruples to interfere with his scientific statements, although he avoids the use of diacritic marks like *γ*, *α¹*, *α²*, etc.

The editions of Homer, on which the grammar is based, are those of Wolf (1804-1807), Bekker (1858), La Roche (1867-1876). Thus, the author disregards some of Nauck's peculiarities like 'Ηρακλεεῖη, and does not mention the forms which Nauck prefers for the contract verbs, *σαισ*, *σαβεσκον* κτλ. He admits freely, however, the gen. sing. of the 2d decl. in *-ο*, prefers *ἐσσ* (*ἐσσι*) to *εἰς*, and says that the loss of the final *ι* in the dat. plur. of the 1st and 2d decl. may, in the great majority of cases, be regarded as due to elision, as *σοῖσ* *ἐτάρουσιν* for *σοῖς* *ἐτάρουσιν*.

The author begins by analyzing the verb and classifying the endings and, modifications of the stem, following with prudence the views of Johannes Schmidt, Brugman, and the rest, in the doctrine of "short forms" of the stem, the length of stems with *ε*, and the like. This division of the work ends with a chapter on the accentuation of the verb (pp. 1-56). He then passes to the discussion of nouns (adjectives and pronouns), their stems, suffixes and endings, and their formation. Under compound nouns is an article on Greek proper names which gives the gist of Fick's view (pp. 57-90). Then follows the use of the cases and numbers (pp. 91-122); of the prepositions, following for the most part Hoffmann and Tycho Mommsen (pp. 123-152); of the infinitive and participle (pp. 153-168); of the pronoun (pp. 168-193); of the moods (pp. 194-240); the particles (pp. 240-269); metre and quantity, including a careful discussion of the digamma (pp. 270-309). Appendixes follow: A, on the tenses with stems ending in *ā*; B, on *σ* in verbal stems; C, on *η* and *ει* in Homer; D, on the assimilated forms; and E, on the order of the particles and enclitic pronouns. Then follows a satisfactory group of indexes: I of Homeric forms, II of subjects, III of the chief passages referred to.

The book deserves and will receive the heartiest welcome. It shows deep and broad learning, most intimate acquaintance with the poems themselves, as well as with the best authorities on individual questions. In following these authorities, excellent and independent judgment is exercised. The statistics are full and seem to be trustworthy; the explanations of the origin and growth of forms and constructions are clear; the examples are generally well chosen and the translations are sometimes extremely felicitous. The author's definition of the so-called *tmesis* (which schoolboys still regard as a kind of surgical operation which Homer was allowed to perform under the general authority of "poetic license") and his genetic treatment of the uses of the prepositions, are very

happy. Teachers will welcome also his statement of final clauses with *ei*, where the "end aimed at is represented as a *supposition*, instead of being a direct purpose, as *ἡλυθόν, εἰ τινά ποι κτλ.*, 'I have come *in the hope* that you may tell,' etc." Perhaps it would have been better, however, if the author had not tried to explain so much. He makes refined distinctions where it is not easy to follow him, and sometimes where he seems doubtful himself. For instance, §299 sg., he explains with Delbrück all the uses of the optative from the meaning of *wish*, with the manner of a man who is telling us just "how it really is," but in §317 he discusses again the original meaning of the mood, and ends in the tone of one who sees great difficulties in the way of the theory. Among the different steps which the optative takes, Monro puts "(8) a gentle or deferential imperative, conveying advice, suggestion, or the like." Among the untranslated examples under this head is *Γ 406 ἡσο παρ' αὐτὸν ιοῦσα . . . μηδὲ ἔτι σοῖσι πόδεσσιν ἵποστρέψεις Ολυμπον*. If we should translate this by the phrase by which the preceding example is translated, it would read "Suppose you don't return to Olympus," which is hardly Helen's tone as she addresses Aphrodite.

Monro's distinction between *δς τις* and *δς τε* seems at least uncertain. He illustrates from *ζ 286 καὶ δ' ἄλλῃ νεμεσῷ ἡ τις τοιαῦτά γε ῥέσου | ἡ τ' ἀέκητι φίλων κτλ.* "Here *ἡ τις* insists on the inclusion of all members of the class (*any one who —*), *ἡ τε* prepares us for the class characteristics (*one of the kind that —*). He asserts that of the five relatives, *δ*, *δ τε*, *δς*, *δς τε*, *δς τις*, "each has a distinct shade of meaning" (§266), but at the end of §270 we are told that the three forms of the conjunction *δ*, *δ τε*, *δ τι*, "do not differ perceptibly in meaning." For the present many lovers of Homer can cherish the same belief concerning the meaning of some of the forms of the relative pronoun.

The treatment of *κέν* and *δν* is interesting though not convincing in all points. Our author rejects the view that *κέν* is Aeolic on the ground that "a foreign or non-Ionic element in Homer in all probability is to be found if at all in isolated words and phrases." The primary use of *δν* and *κέν* is to show that the speaker is thinking of particular instances or occasions. The Homeric use of *τέ* is precisely the opposite. We are told that "the *κέν* marks the alternative"; in §275, *κέν* (in *ἐγὰ δέ κ' δγώ Βρισηίδα κτλ.*, A 183) marks "that the speaker's threatened action is the counterpart of what is imposed upon him"; in §282, *κέν* shows reference to a future occasion; in §282, "the want of *δν* or *κέν* (in *Γ 286 ἡ τε . . . πέληγται*) is doubtless owing to the vagueness of the future event contemplated." After many such explanations it is almost a surprise to be told that "in one or two places the use of *δν* is more difficult to explain."

The careful preparation of the book is evident on every page. Only here and there do we meet with manifest slips. E. g. it strikes us oddly to find on p. 49 *-ομεθόν* given as the ending of the 1st dual, subj. mid., of the non-thematic stems; and p. 52 *-ομεθόν* for the optative. *-μεθόν* is given in the scheme of personal endings p. 3, but on p. 5 it is remarked that the 1st dual *-μεθόν* occurs only in *Ψ 485*. On p. 63, *ἔλεος* is put among nouns with stems in *-εες*, although *τὸ ἔλεος* is found only in writings of the Alexandrine period or later, and the Homeric verb-forms do not indicate a stem *ἔλεες*. The assumption of such a stem for *ἔλεενός* and *ηγλεής* does not justify the placing of the noun in that class. On p. 119, as an example of a plural participle with a singular nominative and verb, we find *ἔκινθθεν δὲ φάλαγγες ἔλπιμενοι*. On p. 167, φ 115

οὐ κέ μοι ἀχνυμένῳ τάδε δώματα πότνια μήτηρ | λείποι is translated "It would be no distress to me," etc., a translation which is grammatically correct, but which probably would not be defended by the author. It is a slip similar to that made by Wagner in his edition of the Phaedo, where on 91 Β ἡττον ... ἀηδῆς ἔσομαι ὀδυρόμενος, he thinks it very strange that no editor should have seen that a μή or an η had dropped out before ὀδυρόμενος. Curious also is the translation on p. 227 of Σ 464 αλ γάρ μν θανάτοιο δυσηχέος ὅδε διναίμην κτλ., "As surely as I wish I could save him from death," for "Would that I could as surely save him from death as furnish him this armor." A careless use of an example is found on p. 252; the enclitic τοι is "especially used where a speaker wishes to imply that he is saying as little as possible, as Il. 4, 405 ἥμεις τοι πατέρων μεγ ἀμείνονες εὐχόμεθ' εἰναι." Other uses of examples might be criticised as p. 265: "The use of κέν to mark contrast may be seen in Il. 11, 408 οίδα γὰρ ὅττι κακοὶ μὲν ἀπολύονται πολέμοιο | δε δέ κ' ἀριστεύησαι κτλ.," where the principal mark of the contrast surely lies in the μὲν and δέ. On p. 214 we are told that the subjunctive is used without δν or κέν in Σ 135 where Thetis tells her son not to enter the battle πρίν γ' ἐμέ . . . Ιδηται, "because it is not meant to refer to a particular occasion when the condition will be fulfilled"; but the occasion is particular enough even though the time is left indefinite.

As an example of the comitative use of the instrumental dative is introduced Thuc. I 81 τῇ γῇ δονλεῦσαι, with a reference to Mr. Riddell and his Digest of Platonic Idioms. This example is so very uncertain (or downright unlikely) that we can ascribe its introduction only to the author's affection for Mr. Riddell, to whose memory this work is inscribed and whose Digest seems to have been the source of more guidance and inspiration to Mr. Monro than to most American scholars.

To the examples under §122, γεραιτερος might well be added.

Misprints are few and generally not troublesome. On p. 113, l. 1, 226 should be read for 736. The name of the editor of Herodian is twice printed as Lenz, instead of Lentz.

It would have been a convenience if, instead of repeating the heading "Homeric Grammar," on each left-hand page, a significant headline had been given. As it stands we have the same headlines "Homeric Grammar.—Clauses with *ei*," on pp. 210-211 and 232-233, with nothing to indicate that here subjunctive clauses and there optative clauses are discussed. But let it not seem trifling to make such criticisms on a book which will be both a luxury and a necessity to every scholar. We may congratulate ourselves on having in our own language a book which fills a gap which is felt by the Germans and the French.

T. D. S.

Etymologisches Wörterbuch der deutschen Sprache, von Dr. FRIEDRICH KLUGE,
Privatdozent an der Universität Strassburg. Strassburg: Karl J. Trübner.
I u. II Lieferungen.

The want of a trustworthy and handy Etymological Dictionary of the German language has long been felt. Grimm's dictionary is a storehouse of information in a historical point of view, nor is it at all defective in the etymological part; but for the general reader Grimm is too expensive, and requires too long a search to

find the information sought. The interest taken in linguistic research, in the origin and history of words, has become so great that even the general reader is now beginning to turn his attention to the subject, and demands a convenient and suitable apparatus to assist him in quenching this thirst for more knowledge. This it is often difficult to find, as many of the would-be etymological dictionaries for the people are anything but safe guides through the labyrinth of etymologies. The name of the author is here a sufficient guaranty against botch-work. Dr. Kluge has already shown, by a number of grammatical essays on the Teutonic languages, that he has a thorough and competent knowledge of the subject, which especially fits him for this undertaking. The clearness and perspicuity of his method of presentation will render his work acceptable to all. The conciseness with which he treats every word is another invaluable advantage to the general reader, and an additional recommendation of the book. With such mastery has the author concealed his severe labor that it is likely to escape detection by any one except a specialist. Undoubted etymologies are separated from the doubtful ones; his conjectures, though based upon the received canons of phonetic change in the Indo-European languages, are given strictly as such and never insisted upon. The word is traced as far back as possible, the forms in the Teutonic and cognate languages are given as far as practicable, the criticisms are to the point and reliable. That Dr. Kluge has profited by the labors of his predecessors is quite natural and commendable. Fick's *Vergleichendes Wörterbuch der indogermanischen Sprachen* is invaluable in work of this kind, and Dr. Kluge has fully availed himself of this storehouse of etymological research. Other authorities have also been judiciously used and we receive the benefit of the latest researches upon the subject. Nor has Dr. Kluge been content to give us merely what others have brought to light. He has himself investigated, and not without success; often he throws light upon the history of a word which has hitherto refused to be explained. He has not attempted, nor could it be expected that he should attempt, to solve every etymological problem, and often one may turn away disappointed from the book, but this is rather a recommendation than otherwise. For there are words which mock all attempts at a solution of the problem of their etymologies. On many points also one might incline to differ, and yet one always feels that the thoughtful considerations of a ripe scholar are before him.

A careful introduction will be needed to explain his procedure in many cases, for instance the employment of the phonetic character *z* for *s* sonans. In citing roots he has also been inconsequent; once he gives *terf*, at another time *trif* or *trp*.

Bastard he considers a word of Celtic origin, that has come to us through French intermediation. This is going back to the old derivation of the word and would probably satisfy its signification much better, but it certainly does not explain many of the expressions found in writers of the age in which the word first began to be used, such as *fils de bast*, *fille de bast*, *he were a bast ibore for he was bigetin o bast*, etc., which would seem to prove that the word should be divided *bast-ard* and not *bas-tard*. As unsatisfactory as the derivation from *bast* 'pack-saddle,' and the suffix *ard* is, it would at least explain these forms much more satisfactorily. There seems no completely satisfactory solution of the problem, whichever derivation one may adopt.

The etymology of the word *batzen* is again involved in controversy. Weigand, and after him Kluge, derives it from the modern *bätz*, *petz*, Mid. H. Ger. *betz*, the nickname for 'bear,' the coat of arms of Bern, which was imprinted upon the coin of this Canton. As it was originally a Swiss coin and more often found in Switzerland and along the Rhine, this seems the most plausible derivation yet offered. The proposed derivation from It. *batezzone*, an imprint of St. John the Baptist's figure, does not give more satisfaction. *Backen* 'to bake,' then 'a mass baked together,' is also hardly probable, although the spelling *bacze*, Mid. Lat. *bacio*, *baciūs*, then *bacēnus*, might favor such a derivation. It seems difficult to hit upon an unobjectionable derivation, and the word will probably never be satisfactorily explained. As it signifies a small coin it most probably comes from a root having the primary signification of 'small.' In the Romance languages (cf. Diez Etym. Dict. p. 251) we find Sp. *pito*, a small pointed piece of wood, O. Fr. *pīte*, the name of a very small coin, Henneg. *pīte*, trifle, Comask *pīt*, little, etc. From the many examples of this root quoted by Diez, he infers an old indigenous stem *pīt*, originally signifying something pointed and small, and that the root is to be found in the Kymb. *pid* 'point.' The Mod. Fr. *petit*, New Provençal *pītit*, Wall. *pīti*, English *petty*, is only an enlargement of this root by the addition of the suffix *-it*. The Eng. *pet* in *pet lamb*, etc., is from the same root. It is possible that this root, which was employed in the bordering lands to denote a small coin, has furnished the Swiss cantons the name for this coin.

Behuf m. aus mhd. *behuof* m. 'Geschäft, Zweck, Förderliches'; Wz. *haf* in *heben*. We should have liked more on this word. The root is undoubtedly *haf*, but *behuf* certainly does not belong to those words derived from this root which *heben* represents. Goth. *hafjan*, *hōf*, *hafans*, Ice. *hefja*, *hōf*, *hafinns*, Lat. *capere*, *cepi*, *captum*, Greek *κάρτη*, probably have the common root *kap*. But this root either had two primary significations, or there were originally two cognate roots which became confounded at any early date. The first signifies 'to hold fast,' 'to retain,' 'to seize,' and the second seems to have developed itself from the signification which the middle voice of the first would naturally have, 'to restrain or moderate,' 'to hold fast for one's self,' 'to make serviceable,' then 'to be necessary.'

That the Goth. *hafjan*, Ice. *hefja*, is in any way allied to Goth. *haban*, Ice. *hafa*, in that one is the strong verb from the root *haf*, and the other the weak verb from the same root, is as improbable as that their corresponding Latin equivalents, *habere* and *capere*, are related to each other. The Ice. *hafa* does indeed pass into the sense of *to aim at*, *to hit*, which, as we shall immediately see, is one of the meanings of the Ice. verb *hæfa*, and this undoubtedly belongs to the second meaning of our root *haf*. But this can only be the result of a later confusion of meanings on account of some slight similarity of forms. In *behuf*, however, we have a signification derived from the root *haf* as given under number 2 above, and to which Ice. *hæfa* (*hoefa*), (1) 'to hit,' (2) 'to fit,' (3) 'to behove,' 'to be meet,' *hof* n. 'moderation,' 'measure,' Eng. 'behove,' 'behoof,' etc., belong. The Goth. *ga-hōbaini*, 'temperance,' 'self-restraint,' the German *hufe*, *hube*, 'a measured quantity of land,' are from the same root.

Bigott adj., erst nhd., entlehnt aus frz. *bigot*, aber an Gott graphisch angelehnt. Kluge here wisely dodges the whole question. Not much more can be said, it

is true, in regard to this difficult word, but an expression of opinion would have been in place.

Brise f. 'leiser Wind,' aus gleichbed. engl. *breeze*? (woher auch frz. *brise*). The opposite is probably true, the Eng. *breeze* coming from French *brise* (cf. Skeat, p. 76, and Diez, p. 66).

The two numbers reach *hehlen* and we are promised the completion of the work in seven or eight numbers. We do not doubt that the author will be able to bring his work within the prescribed compass, if he observes the brevity which so far has characterized the work. The whole is not to cost more than twelve marks and will thus be within the reach of a wide class of students. The fact that German type is employed indicates that it is intended for a wide circulation. We shall wait impatiently for its completion.

S. P.

Altenglische Legenden. Neue Folge. Mit Einleitung und Anmerkungen. Herausgegeben von C. HORSTMANN. Heilbronn: Gebr. Henninger, 1881. Barbour's des schottischen National-dichters Legendensammlung nebst den Fragmenten seines Trojanerkrieges. Zum ersten mal herausgegeben und kritisch bearbeitet von C. HORSTMANN. I Band. Heilbronn, Gebr. Henninger, 1881; II Band, 1882.

In 1875 Horstmann first published his *Altenglische Legenden*, and in 1878 his *Sammlung Altenglischer Legenden*, which have now been greatly enlarged by his *Altenglische Legenden*, neue Folge. This work is provided with a general introduction, which treats of the meaning and position of the Legend, the first part showing the introduction and reading of the Legends as part of the daily church service, at first in the monasteries and later in the parochial churches, where, being read in the vernacular, they supplied the place of sermons and homilies. The second part shows the origin and development of the Legends from the Martyrologies, to which the Lives, at first authentic, were gradually added, and then these were so increased by the introduction of the unauthentic and the miraculous, and by additions to their number, that every day in the year was provided with its saint's life. Starting from the Martyrology of Eusebius, worked over by Jerome (as is thought), rewritten for the English church by Beda, though preserved only in the form given to it by Florus, added to by Rabanus Maurus, Ado, Usuardus, Notker (†912), and others, the list at last contained in outline the legends of all the saints of the church. These, increased by the Lives and by didactic additions, were collected in one whole by Wolfhard, about the beginning of the 10th century; Aelfric's Anglo-Saxon collection, about the end of that century, presupposes a Latin original. But the increased worship of saints in the 13th century gave occasion for the great work of Jacobus a Voragine, archbishop of Genoa 1292-98, the *Legenda aurea sive Historia lombardica*, which took the place of all preceding collections, "und als goldenes Volksbuch sich im Fluge die Welt eroberte." Jacobus united all the material accessible to him, and presented a collection of Legends as complete as possible, a sort of final edition. The older Old-English collections of Legends, while proceeding from Latin originals, do not depend on the *Legenda*

Aurea, but the later collections, as Barbour's and others, are mostly translated word for word from that work. The older collections, however, show an exact agreement with it even in the most minute particulars. Here follows a special introduction of a hundred pages on the Old-English collections of Legends, in which six such collections are enumerated and the various manuscripts of these most carefully described.

The Legends form an important division of Old-English literature, which is chiefly of a religious tone and is written for the moral and spiritual edification of the people. Soon after the conversion of England this Christian poetry took the place of the heathen national epic poetry. [The Christian influence is seen already in the heathen "Beowulf."] The four legends of Cynewulf, Guthlac, Juliana, Andrew, and Helena, belong to the flourishing period of Anglo-Saxon poetry, the second half of the eighth century. To the tenth century belong the Menology, the Blickling Homilies, those of Aelfric, and his *Passiones martyrum*, the first collection of Old-English Legends (soon to be published by Professor Skeat for the Early English Text Society), and a little later the Homilies of Archbishop Wulfstan, only one of which has yet been published. During the reign of Norman influence the Homilies were still read and copied, the Ormulum, the Acrene Riwle, and the contemporary Legends, S. Marherete, Juliane, and Katerine, were produced. Others are found during the thirteenth century which, while showing French influence, preserve their national, epic, Germanic character. The later legends are written under the influence of the French romantic poetry, and as pure poetry are inferior to those mentioned above. They are composed by monkish poets for the service of the church and for reading in sermons, hence poetic style yielded to practical ends.

The limits of this notice permit a mere mention of the six collections. I. The first of these is the *South-English* collection, composed in Gloucestershire in the last quarter of the 13th century, probably by the monks of the abbey of Gloucester, but not all by Robert of Gloucester, to whom it has been attributed. II. The *North-English* collection of Homilies and Legends. Although the North withheld itself from French influence longer than the South, still this influence finally penetrated there, and in the beginning of the 14th century the North was the chief seat of English literature; here more attention was paid to poetic form, and verse and rime were handled with greater skill. The *Cursor Mundi*, a compendium of biblical history, with additions from the apocrypha, and the legends, is the first principal work of this kind. Soon after arose the northern cycle of Homilies. The original collection comprised merely the *Dominicalia evangelia*, or the Gospels for the Sundays of the church-year, with those for Christmas, Epiphany, Easter-Monday, Whit-Monday, Ascension, the Purification and the Assumption of the Virgin Mary, paraphrased, expounded according to the Fathers, and accompanied by an edifying legendary tale. This collection was based on the Missal of the Diocese of Durham. Next comes the collection of the *Vernon MS*, written about 1375 in the Southern dialect, comprising the *Dominicalia* of the northern cycle and a series of later Homilies, originally composed in the Southern dialect. Lastly comes the collection of Homilies and Legends in *MSS Harl. 4196* and *Cotton. Tiberius E VII*, the first of which belongs to the middle of the 14th century and the second is a little earlier. This new collection absorbed the old and added a large number of

new pieces, and it is this which Horstmann prints in full, containing thirty-four legends, and an appendix, Alexius, from other MSS. III. *Barbour's Scotch collection* forms the third, contained in only one MS, Camb. Univ. Libr. Gg II, 6, composed about 1380-90. English saints are excluded from the work, and its source is the *Legenda aurea*, with some omissions and additions. Horstmann's *Altenglische Legenden* contains but one legend, that of *S. Machor* or *Moris* from this collection, the other forty-nine being published in the separate work mentioned above. IV. The *Festival* of John Myrk, a prose collection, in the dialect of Shropshire, forms the next important work. Myrk was a Canon of the monastery of Lilleshul; his Instructions for Parish Priests have already (1868) been published by the Early English Text Society. He wrote this work about the year 1400, and tells us in his Prologue: "I haue drawe this treti sewyng owt of *legenda aurea* with more addyng-to." He has worked very freely, and his additions are from the *Gesta Romanorum* and English sources. It was first printed by Caxton, 1483, and Horstmann gives eighteen editions printed between 1483 and 1532, a strong proof of its popularity. He prints as an example the Sermon on the Festival of S. Alkmund, from the oldest MS, Cotton. Claudius A II. V. Osbern Bokenam's Lives of Saints, 1443-46, contains twenty-seven lives of female saints. It exists in but one MS, Arundel 327, and was printed for the Roxburgh Club in 1835. The author was a "doctor of dyuynite, frere Austyn of the Convent of Stokelare" in Suffolk, and used the *Legenda aurea* as his source. VI. Lastly, we have the Old-English translation of the *Legenda aurea*, made in 1438, and published twice by Caxton, 1484 and 1487, with many additions. It was probably written by different hands, and translated from the French, not directly from the Latin, as a note to one of the four MSS asserts.

Besides the above-mentioned thirty-four legends from MSS Harl. 4196 and Cotton. Tiberius E VII, with one from Barbour's collection, Horstmann publishes twenty-three single legends, extending from A. D. 1290 to 1430, and one, St. Eustas, by John Partridge, as late as 1566, with an appendix containing four others. We thus have at hand a collection of sixty-three legends, belonging chiefly to the fourteenth century, with a very complete introduction, to which this summary has done but scant justice. It supplies valuable texts for the study of the religious literature of that century, and for the further prosecution of the grammatical and metrical investigations already instituted by Dr. Morris, Professor Skeat, and other editors of the Early English Text Society's publications.

Barbour's collection has already been mentioned above. Horstmann's introduction to the first volume describes its relation to the *Legenda aurea* and the sources of those portions not taken from that work. Barbour's independent additions often show his personality, especially his merciful and conciliatory disposition. The object of the work, as of other such collections, was a religious one, the spiritual edification of the laity.

Vol. I contains twenty-six legends, and Vol. II twenty-three, together with two fragments of Barbour's *Sege of Troye*, one from the beginning (596 lines), and the other from the end (3118 lines). The source of Barbour's work is Guido da Colonna's *Historiae destructionis Troiae*, and the corresponding Latin text is printed by Horstmann at the foot of each page. The

fragments are contained in two MSS of Lydgate's Troy-Book, and form the beginning and the conclusion of that work. They are written in riming iambic couplets of four feet.

JAMES M. GARNETT.

Terentiana. *Quaestiones cum specimine Lexici*, scripsit Dr. EDMUNDU HAULER. Vindobonae apud Hoelderum, 1882. Pp. 47.

The subject of Latin lexicography has come prominently to the foreground within the last decade, and such is the present activity of scholars in this field that the outlook for the future is very hopeful. The special lexicon of Merguet to the Orations of Cicero, which has already reached the letter Q, and the Lexicon Taciteum of Gerber and Greef, are models of their kind, and in point of fullness and detail of arrangement leave little to be desired. According to recent announcements of Teubner we shall soon have a Lexicon Lucretianum with full citation of passages by Dr. J. Woltjer of Amsterdam, and Dr. Hauler presents us here with what promises to be a very complete lexicon to Terence. A Plautus lexicon can hardly be begun until all the plays have been critically edited. A pressing desideratum which ought to be supplied in the near future is a special lexicon to the letters of Cicero. The indefatigable Dr. Georges, who has just entered on his seventy-seventh year, deserves the lasting gratitude of scholars for the conscientious way in which he has utilized the special monographs on different authors for the improvement of his dictionary. Not, however, until we have complete special lexica to the authors of different periods, and indices to the Inscriptions, can we expect a Latin dictionary which shall in any way adequately represent the wealth of the Latin language.

The editor of a special lexicon to any author must be something more than a mere index-maker. He must enter into the spirit of his author, know his syntax, and have at least a fair acquaintance with the usage of contemporary and preceding writers. Dr. Hauler has wisely given us some evidence of his fitness for the task which he has undertaken by his judicious treatment of several *quaestiones* connected with the text of Terence.

In Eun. v. 267, where Umpfenbach reads

Set Pdrmenonem ante ostium †Thaidis tristem video,

he proposes *huius* (or *eius*) *stare* for *Thaidis*. He reviews the various emendations hitherto proposed (omitting, however, to mention that of Sievers in *Acta Soc. Phil. Lips.* Vol. II, p. 79 to read *Thainis* for *Thaidis*), and shows that Bentley was on the right track in proposing to read *opperiri*, which verb, however, does not suit the meaning as well as *stare*. *Thaidis* was a gloss for *huius* which afterwards crept into the text. *Statur* in Parmeno's reply, v. 271, supports *stare*. Dr. Hauler will doubtless not be displeased to learn that Bentley in effect anticipated his proposal. On the margin of Bentley's private copy of his 1726 edition of Terence, now preserved in the British Museum under number 833 K. 13 (see Vol. III of this Journal, p. 61 f.), I find *stare eius*, while *opperiri* is underscored as no longer satisfying Bentley. The order *stare eius* was no doubt adopted by Bentley to give the verse the regular caesura. I must not omit to mention that before the verse he has also written *iam stare*. In confirmation

of his conjecture Dr. Hauler might have added that in the similar verse Hec. 428:

Sed Pdmphilum ipsum video stare ante ostium,

stare is actually omitted by the Bembinus; also that Euphrasius in Eun. II 2, 37 (268) says "Integra nobis sunt omnia, si quidem adversarii *ante ostium stantes*, propterea frigide agunt."

In Phormio v. 863 where recent editors read *adprehendit* on the authority of the Calliopian recension, Dr. Hauler makes it probable that *reprehendit*, the reading of the Bembinus (first-hand), is to be retained. It is certainly strongly supported by the alliteration,

Pone reprehendit pallio, resupnat, respicio rogo,

and by Epid. I 1, 1: *Quis properantem me reprehendit pallio?* cf. also Trin. 624, Mil. 60. Curiously enough here too Bentley had written on the margin Epid. I 1, 1, as though contemplating the change to *reprehendit*, although he appears not to have known the reading of the Bembinus. The reading *adprehendit* is doubtless due to the fact that when the Calliopian recension was made, *adprehendere* was the verb commonly used in this connection. So the Vulgate has *apprehendens pallium* (cf. Haut. 509 with the Schol. Bemb. cited by Hauler, and Amph. 1116 where B. has *phendit*, but EF *apprehendit*).

Dr. Hauler is equally cogent in his defence of *percepit*, the reading of the Bembine in Hec. 363. The verse should stand

Pdrtim quae perspexi his oculis, pdrtim percepit auribus,

and furnishes a good example of alliteration. Dr. Hauler might have noted that in Cas. V 2, 5,

Est operaे pretium auribus percipere,

Geppert's P has *accipere*. Later usage no doubt favored *accipere*. Cicero, Philip. VIII 28, has "non dico animo ferre, verum *auribus accipere* potuistis?" and Servius, in his commentary to Aen. IV 359, explains *his auribus haus* by *accepi*. In Phormio v. 82 Arruntius Celsus furnishes very good warrant for reading *ardere coepit* instead of *amare*, and this reading Dr. Hauler defends against the authority of the MSS.

He next discusses the form of the voc. of Greek nouns having the nom. in *ēs*, and criticises Umpfenbach and Fleckeisen for uniformly reading *Laches* and *Chremes*, often against the distinct testimony of the MSS and of Priscian, in favor of *Lache*, *Chreme*. As a result of his investigation he finds that both *Chremes* and *Chreme* are used indifferently at the close of a verse, and within the verse before *m* and *t*, while before *a*, *qu*, *i*, *cons*, *Chremes* occurs; before *p*, *s*, *v*, *c* only the form *Chreme*. In my collation of the cod. Dunelmensis (Bentley's "codex vetustissimus") I find *Chreme* in vv. 550, 574, 868, 895, 906, 930, 945, and *Chremes* in vv. 241, 561, 917, 946. This may help to explain Bentley's preference for *Chreme*. He only admits the form *Chremes* in Eun. 535, 743, and Haut. 1052. Subsequently, however, I find that he admitted it in And. 945 (V 4, 42), where according to his marginal notes he would also read *Pasibulast*. CH. *ipsa ea'st*, with a reference to Ph. V 1, 11. The remainder of Dr. Hauler's dissertation is taken up with a discussion of some peculiar forms of *όμοιοτέλευτον* in Early Latin, and

an exposition of words borrowed from the Greek found in Terence, with such data as are ascertainable in regard to their introduction into the Latin language. These sections cannot be so readily summarized. The Prolegomena ad Lexicon Terentianum, pp. 27-35, set forth the principles which are to govern him in the use of editions, the mention of various readings, the orthography and other matters. The plan is so well conceived, and the few specimen pages of A (closing with the word *acuo*) are so thoroughly good, that we can only wish that everything will prove favorable to the speedy execution of his design, so that we may have ere long a Lexicon Terentianum worthy of the name.

M. WARREN.

Deutsche Litteraturdenkmale des 18 Jahrh. in Neudrucken herausgeg. von BERNHARD SEUFFERT. Heilbronn: Gebr. Henninger. 1882.

6. *Hermann* von C. M. Wieland.

It is not very long since Germanistic Philology began to investigate the German language, after the Reformation, with a care similar to that given to the older forms of the language. The poets of the 18th century especially, who represent to us the last stage of the German language, had long been neglected. This may have been due partly to the practice of measuring them merely with reference to their aesthetic and literary value, partly to the fact that they stood too near us to be judged with an historical eye. But this time has now passed. And as it seems that a total reformation in the method of writing the history of literature will soon be necessary, we desire to have those specimens of literature before our eyes, which have so far been very rare.

The new print of Wieland's "Hermann" forms the 6th number in the series of this laudable enterprise, conducted by B. Seuffert, which seems to continue Braune's Neudrucke des 16 u. 17 Jahrh. The selection of the pieces that have appeared so far shows taste and discrimination, and we are glad to have Wieland's "Hermann" now for the first time printed in full from the manuscript of the poet. It belongs to that kind of patriotic poetry which was introduced by Klopstock. The preface to our edition, although written with care, is in the usual dry style of such introductions, and forgets to point out the great patriotic movement among the young poets of the last century, how in the midst of great political misery they dreamed of a German fatherland, and how their aspirations were finally crowned with the events of 1871. To this movement, essentially the opposition of German thought and sentiment to French influence, we owe the best of Herder's and Goethe's youthful productions, and in this historic light alone does Wieland's "Hermann" receive its value. The poem shows us the future qualities of Wieland's poetry already "in nuce," although he was still a very dependent disciple of Klopstock. This dependence, as well as the difference of Wieland's and Klopstock's style and language, could also have been set forth to better advantage in the introduction.

If we are allowed to make a suggestion we would like to see also Karl Philipp Moritz: Ueber die bildende Nachahmung des Schönen, Braunschweig, 1788, in this series.

JULIUS GOEBEL.

Petronii Satirae et Liber Priapeorum. Tertium edidit FRANCISCUS BUECHELER. Adiectae sunt Varronis et Senecae Satirae Simi esque reliquiae. Berlin, 1882.

This admirable work of the great Bonn scholar has now attained a completeness which makes it perfect in its kind. The second edition had supplemented the work of Petronius and the Priapea by Bücheler's reading the fragments, mainly contained in Nonius, of Varro's Menipporean Satires; to the third issue he now most judiciously adds his edition of Seneca's *Apocolocyntosis*, the fragments of Sisenna's Milesian stories, the *Leges Coniuales* given at the end of the *Querulus* (a most trying piece of Latin), and the *Testamentum porcelli* which, according to Jerome (Pref. to his commentary on Isaiah) was repeated in the schools of his time by crowds of giggling boys. A more entertaining book it would be impossible to mention in the whole range of Latin literature; the name of Bücheler is alone a sufficient voucher for the care with which each part has been edited. The only thing wanting is that impossibility, a good explanatory commentary.

R. ELLIS.

REPORTS.

Neue Jahrbücher für Philologie und Paedagogik. FLECKEISEN u. MASIUS.
1881.

V.

44. Pp. 289-305. O. Crusius of Dresden reviews Tümpel's *Ares und Aphrodite* (Jahrbücher, Supplementband, 1880). Of late it has been assumed that the connection of these divinities was merely the result of poetic caprice. Tümpel follows a hint from Overbeck and maintains the true national and religious significance of the union, devoting to the long-neglected problem a searching investigation which is thought to have settled the main points of the question. Neither in ancient poetry nor in any work of art of the best period is there any hint of a connection between Ares and the armed Uranian Aphrodite. It is conjectured that the original companion of Ares was one of the Greek goddesses who guarded the citadel of Boeotian Thebes; and that she, changed to Aphrodite under Semitic influence, gave occasion for the union of Ares and Aphrodite. Demeter, Athena, Eriny, who had a common altar at Thebes, are identified by T. with the trinity of Aphrodites of the Cadmean citadel—Urania, Pandemus, Apostrophia (introduced in Rome as *Venus Verticordia*). The name *Urania* may have given the first impulse to the assignment of different moral characters to the three forms. The identity of the Eriny (corresponding to the Athenian Enyo) with Aphrodite Apostrophia is thought to be established by Tümpel, who assigns her as mate to Ares, as Demeter-Aphrodite had been convincingly assigned to Hermes by H. D. Müller. This Aonian couple of Ares and Eriny was the original of Ares and Aphrodite. The Gordian knot of the descent of Ares is cut by T. who recognizes him as a primitive Greek god, and insists that the belief in the god's Thracian origin arose from the warlike nature of the Thracians.

The essay is considered a valuable contribution to the history of Greek religions. It illustrates well Müller's law, that the divinities of the Greek people were generally united in pairs or groups.

45. Pp. 305-307. A. Schultz of Hirschberg, *à propos* of Roscher's *die Gorgonen*, etc., interprets the story of Melanippus and Comaetho ("fiery locks"), Paus. VII 19. The one is the dark thundercloud, the other the gleaming lightning. Their love is only a different form of the story of Poseidon's love for Medusa.

46. Pp. 308-309. R. Schneider of Duisburg, from MS lexicon (of Moschopulus?) of the XIVth century, in the Munich library, communicates a page of extracts which are interesting for their citations from the Greek poets.

47. Pp. 309-310. R. Löhbach of Mayence (see Am. Journ. Phil. I 376) returns to "der goldene Schnitt" of the hexameter, iambic trimeter, Sapphic verse, etc. As the iambic trimeter consists of 18 *morae*, of which 7 precede and

11 follow the penthemimeral (the most usual) caesura, we have the proportion 18:11::11:7. In the hexameter we have to assume that the caesural pause occupies two *mora*e. Then the verse consists of 26 *mora*e, of which 16 (counting the pause) precede the hepthemimeral caesura and 10 follow it. Then 26:16::16:10 (approximately). A hexameter verse with trithemimeral, penthemimeral, and hepthemimeral pauses will have divisions of 6, 4, 6, 10 *mora*e. Then 16:10::10:6; 10:6::6:4.

48. Pp. 311-320. F. Kiel of Hannover treats of the truce of 423 B. C., Thuc. IV 118. The document is divided into four parts. The first concerns the use of the temple and oracle at Delphi, and was prepared at Athens as is shown by the present *dokei* distinguished from the *έδοξε* of §4. The second article, concerning the punishment of temple robbers, was added at the wish of the Athenians, but probably had been discussed in Sparta. The third and fourth articles, beginning *τάδε έδοξε κτλ.*, concerning the line of demarcation between the two parties during the truce, and arranging for possible changes in the conditions and for the continuance of the truce—these articles had been voted in Sparta in the form in which Thucydides gives them. The Phocians took no part in the truce because they disliked the interference of the first articles with their state. The Boeotians perhaps did not want a truce and may have objected to the second article.

49. P. 320. H. Schütz of Potsdam proposes four emendations to the Histories of Tacitus.

50. Pp. 321-326. E. Rohde of Tübingen on the date of the composition of the Theaetetus of Plato. He refers the "25 ancestors leading to Heracles," Theaet. 175 a, to either Agesilaus of Sparta or Philip of Macedon, who are shown by their genealogical trees to be of that degree of descent from Heracles. Philip seems to have received his first "encomium" from Isocrates, and though the Xenophontine Agesilaus (beginning *τοῖς προγόνοις . . . πέστος ἀφ' Ἡρακλέοντος ἐγένετο*) might well be hit by Plato's words, the Evagoras of Isocrates (not earlier than 374 B. C.) was the first prose encomium on a contemporary. If encomia on Agesilaus († 361-360 B. C.) are referred to by the Theaet., then this dialogue was composed after that time, but surely it was written after 374 B. C. Plato is not hitting Isocrates but the Encomiasts who followed Isocrates. But the Theaetetus was earlier than the Sophistes and Politicus and also the Philebus. The later composition of the Philebus is shown by the concession without argument of the *δέξαι ψευδεῖς*, 36 cd, which presupposes the argument of the Theaetetus, as the rapid conclusions of the Phaedo concerning the *ἀνάμνησις* of the act of learning are a distinct indication of the earlier composition of the Meno, where this argument is stated in full.

51. P. 326 H. Schütz of Potsdam proposes three emendations to Tacitus's *Dialogus de Oratoribus*; reading in §18 *nulla a parte*, and removing *magis* or *prae* from *qui prae Catone*, etc. in the same §. In §36 for *sapret* he would read *caperet*.

52. Pp. 327-335. E. Ziegeler of Bremen criticises Bernays' *Lucian und die Kyniker*, Berlin, 1879. Bernays idealized the *κυνισμός*, and thus could hardly be a fair judge of Lucian, the zealous opponent of the cynics. This sentiment seems to lead Bernays to believe the *Demonax* not a work of Lucian. His

other arguments for this view are not convincing. Ziegeler still holds that Demonax was a historical personage, and considers the Demonax a genuine work of Lucian.

53. Pp. 335-336. T. Büttner-Wobst of Dresden would remove $\delta\sigma\alpha\tau' \alpha\delta$ $\mu\omega\rho\chi\alpha\iota\alpha$ from the text of Xenophon, Cyrop. I 1, §1. After the mention of the fall of the democracy we expect in an Athenian writer to find the oligarchy which took the place of the democracy in Athens. The succession 'democracy, monarchy, oligarchy, tyranny,' is strange; and $\mu\omega\rho\chi\alpha\iota\alpha$ is seldom used by Xenophon (we expect $\beta\alpha\sigma\iota\kappa\iota\alpha$, cf. Mem. IV 6, §12, and Ages. I 4).

54. Pp. 337-356. Realistic notes on Horace, by O. Jäger of Cologne. Although Horace is the most popular of all ancient poets, next to Homer, so much has been read and written about him that it is hard to find our way to the poet himself, through what is external. The critical superstition that he cannot have written anything in bad taste or style also interferes with our judgment. These notes are intended to lead us to receive the impression which was made upon the first readers or hearers of the poems. In Sat. II 3, 305-326 in the rehearsal of the poet's faults, he is accused in a comic way of the very opposite of his real faults. Car. III 3 finds its explanation and true value when it is taken as a reference to a supposed desire of Augustus to remove the seat of the Roman empire to Alexandria or Troy. In general, Jäger thinks Horace a shrewd politician. The *sermones deorum* of Car. III 3, 71, are explained by Sat. II 6, 40 fg., and by the *deos* of v. 52. The inconsistencies of Car. III 27 are explained as arising from the poet's inability to resist the temptation to give a poetical picture of Europa. The Marsyas statue of Sat. I 6, 120 is shown by a relief found in Rome in Sept. '72, which agrees with some old coins, to be a Silenus with the wine-skin, but the connection shows that it was a rude old statue with the face contorted as if he had been flayed.

55. Pp. 357-360. Critical notes by K. Rossberg of Norden to the *Aegritudo Perdiciae*, published by Bährens in his *Unedited Latin Poems* (1877).

56. Pp. 361-364. Fr. Rühl of Königsberg on Alexander and his physician Philip. The various sources are examined, and it is shown that the story of Alexander's sickness, as caused by a bath in the Cydnus, and the incident of the physician, is a myth. The letter warning the king against his physician could not have come from Parmenio or Olympia.

57. Pp. 364-365. Carl Jacoby of Danzig urges the reading which Bentley proposed, *sic di voluere*, for Hor. Car. I 12, 31.

VI.

59. Pp. 369-380. Review by J. Renner of Littau of Homers Iliade erklärt von Faesi; sechste Auflage von Franke, I-II, 1879-80. The editor's work is highly commended and a number of occasional remarks are made upon passages in books A-M.

60. Pp. 380-382. J. Sitzler of Tauberbischofsheim discusses $\tau\dot{\iota}\dot{\iota}\sigma \pi\theta\theta\epsilon\tau \epsilon\iota\zeta$ $\dot{\alpha}\nu\delta\rho\omega\dot{\alpha} \kappa\tau\lambda.$, Hom. a 170. He considers this equivalent to $\tau\dot{\iota}\dot{\iota}\sigma \tau\iota\omega\dot{\sigma} \dot{\epsilon}\sigma\dot{\iota}$ of Simonides, Ep. 154, and supports his view, among other arguments, by Hom. Hy. Dem. 113 $\tau\dot{\iota}\dot{\iota}\sigma \pi\theta\theta\epsilon\tau \dot{\epsilon}\sigma\dot{\iota}$, $\gamma\rho\dot{\eta}\dot{\nu}$, $\pi\alpha\lambda\alpha\gamma\epsilon\eta\epsilon\omega\dot{\alpha} \dot{\alpha}\nu\theta\rho\omega\pi\omega\dot{\alpha}$, which can hardly be 'from

61. Pp. 383-384. H. Eichler of Frankfort an der Oder, in Plato's Laches 196 *d* would strike out $\pi\alpha\sigma\alpha$ before $\dot{\nu}\zeta$.

62. Pp. 385-391. R. Gropius of Weilburg praises Pulch *de Eudociae quod fertur Violario*. G. had himself cherished and sent to the *Jahrbücher* for publication views which were preoccupied by Pulch. It is shown that the *Violarium* was a literary fraud of the XVIth century. The basis of the work is the edition of Phavorinus published at Basle in 1538, and of Cornutus and Palaephatus, 1543. Gropius adds various comments to his statement of Pulch's views. [Pulch shows in *Hermes* XVII 177 fg. that the author of the *Violarium* was a clerk of the Library at Paris named Palaeocappa.]

63. Pp. 391-392. Beloch of Rome would read Ἰπωνίας καὶ Μεδμαίονς for Ἰτωνίας καὶ Μελαιόντις in Thuc. V 5, 3.

64. P. 392. R. Dressler of Bautzen would read in Stobaeus, Anthol. XLVI
67 αὐτὸς καταδικάζων κλαίεις for καταδικάζεις καὶ κλαίεις.

65. Pp. 393-398. E. Rosenberg of Hirschberg calls attention to many Homeric reminiscences, especially in adjectives, in the poems of Horace.

66. Pp. 398-400. P. Stengel of Berlin on Ἡρακλῆς Μήλων. He thinks the name was given to the hero first as protector of the flocks, and that the name afterwards brought him sacrifices of fruits. Stengel enumerates examples of offerings of *figures* of animals instead of the animals themselves.

67. Pp. 401-416. Baehrens of Groningen on Latin poets. The slave-name *Afer* which the poet Terence retained after his manumission, shows that he was known only as an African by birth. If anything had been known of the later story of his Carthaginian birth, he would have been *Poenus* or *Poenulus*. Baehrens offers emendations to Suetonius' life of Terence and to the *Andria*; then to Lucretius, Ovid and the Latin Anthology.

68. P. 416. G. Landgraf of Schweinfurt collects instances of *sic = tum*, *deinde*.

69. Pp. 417-420. Th. Plüss of Basle energetically maintains, against Lange, his view of the *sex suffragia*, that they were a later grouping of the 12 *centuriae*, each pair of *centuriae* having one vote.

70. Pp. 421-422. G. Heidtmann of Wesel conjectures *bis senis* for *bi denis*, Verg. Aen. I 381 (giving Aeneas the same number of ships as Ulysses); *facilem recu* for *facilem victu*, I 445. In I 505, *media testudine* is explained as the middle of the *breadth*, not of the *length* of the temple roof. The temple had a vaulted roof, not a dome.

71. Pp. 423-425. A. Viertel of Königsberg shows the correctness of the old tradition that the MS of Tacitus' *Annals* came from Corvey to Italy not long before 1500, into the hands of Giovanni de' Medici, afterwards Leo X.

72. Pp. 426-428. Rohde of Tübingen gives a page from a rhetorical *ávédoros* of the Brussels library, a commentary to Cicero *de inventione*.

73. Pp. 429-431. Rönsch of Lobenstein discusses the Latin adjectives in *-stus* and *-utus*.

74. Pp. 431-432. Dombart of Erlangen offers two emendations to Paulinus of Nola.

75. P. 432. E. Klussman in the Genethliacus of Claudius Mamertinus would read (c. 3, s. 104, 1 Baehrens) for *Herculistus*, *Hercules iste tuus*.

VII.

(23.) Pp. 433-448. Christ of Munich continues his remarks on interpolations in Homer (see Am. Jour. Phil. III 261). How is the agreement between the Homeric and the Cyclic poems to be accounted for? Did the Cyclic poets follow the Homeric poems and the older lays of the Trojan cycle, or are the passages which seem to indicate this to be explained as later interpolations in the Homeric poems? Christ first takes up the clear case of Hom. δ 280 fg. (of the experiences in the wooden horse) where 280-284 give the old form of the story with the names of the ἄριστοι Ἀχαιῶν, Menelaus, Diomed, and Ulysses; in 285-289 follows the later form of the story as it was developed by the cyclic poets. So the passage δ 247-249 is ascribed to a desire for harmony with the Little Iliad, and δέκτη, v. 248, is to be written Δέκτη as it was in the cyclic poets. Of the dittography Λ 441-456, Christ agrees with Nauck, etc., in considering 444-453 the interpolated part, calling attention to the fact that it is not enough to remove 454-456, since 444 fg. do not harmonize well with 441 fg. Τ 144 Αἰθρη Πιτθῆος Θυγάτηρ κτλ. was inserted under the influence of the Iliupersis and Little Iliad, in which without regard to chronological difficulties the Theseus legends were brought into connection with Troy. So Ω 29-30 (the judgment of Paris) are referred to an interpolator who brought into our text a reminiscence from the Cypria of Stasinus. C. also separates lines and passages which he believes to have come in under the influence of Hesiod or the Argonautic myths, as κ 137-139, μ 69-72 and 61-65; also μ 3-4, since not the Ulyssian but the Argonautic story had to do with the far East.

These are interpolations, but it is remarked that the verses in our text of Homer which presuppose well-developed myths of Heracles, Tlepolemus, Meleager, Melampus, Theseus, are found only in the later parts of the Iliad and Odyssey.

76. P. 448. J. Golisch of Schweidnitz illustrates ἵν' αἴτοῦ, Soph. Trach. 145, by ἐνθάδ' αἴτοῦ, Soph. O. T. 78; αἴτοῦ ἐκεῖ, Thuc. VII 16, 1; αἴτοῦ κ' ἐνθα, Θ 20; ἐνθάδε κ' αἴθι, ε 208.

77. Pp. 449-480. E. Hiller of Halle reviews Theognidis elegiae recog. Ziegler, 1880; and Theognidis reliquiae ed. Sitzler, 1880, and discusses many of the questions relating to the poet and his works which are thus introduced. Ziegler's edition is pronounced indispensable to any student of Theognis, while Sitzler's work is severely criticised.

78. Pp. 481-493. E. Petersen of Prague notices with high praise R. Schneider's die Geburt von Athena and J. Dürr's die Reisen des Kaiser's Hadrian, Abhandlungen des Arch.-Ep. Seminars, Vienna, 1880-81.

79. Pp. 493-494. C. Lang of Offenburg offers conjectures to the text of *Cornutus*.

80. Pp. 495-496. A. Procksch of Eisenberg gives statistics concerning the position of *quisque* and *uterque* in Cicero (see *Am. Jour. Philol.* II 268, 533).

81. Pp. 497-507. C. Gneisse of Metz discusses Lucretius's use of *porro*, including questions of text criticism and exegesis.

82. Pp. 508-510. G. P. Weygoldt of Lörrach shows that the statement of the pseudo Plutarch that Diogenes considered the heart the seat of the soul, refers to the Stoic, and not, as has generally been understood, to Diogenes of Apolloniates.

83. Pp. 511-512. Georges of Gotha presents a lexicographical and critical miscellany to Latin authors.

84. P. 512. O. Weise in *Pliny Nat. Hist.* XXI 111 would read *oiston* (*οἰστόν*) for *pistana*.

T. D. SEYMOUR.

REVUE DE PHILOLOGIE. Vol. VI.

No. 2. April.

1. Pp. 112-148. Criticism of Greek texts at the *École des Hautes Études*. I. Sophocles: 154 emendations, submitted by "Y." These emendations may be classified into certain, probable, plausible, improbable, impossible. In the last two classes are found some that are entirely unnecessary. Without attempting to assign each to its class, I shall call attention to a few that are, from whatever cause, especially striking. In *Ai.* 523, *yévoit' éb'*¹ and Wecklein's conjecture *πέλοιτ' ἔθ'* or *πέλοι πόθ'* are condemned because "one can neither become nor cease to be well born" (*bien né, érigéνης*), and the tame *οὐκ ἀν λέγοιτ' ἔθ'* is proposed. Here it is assumed that *είγενης* is always used in a literal sense, which is by no means the case; for while Aristotle teaches expressly that the difference between *γενναῖος* and *είγενης* is that the former *always* implies nobility of character as well as birth, *είγενης* certainly sometimes refers especially to character. The Lexica cite *Antig.* 38-9, *Philoct.* 8, 74, etc. In *Eur. Frag.* 345 and 514 we have a play upon the one meaning in *εὐγένεια* and the other meaning in *εὐγενῆς*. Besides, even if this were not the case, the emendation would not be satisfactory. People could have no objection to calling one *είγενης* in a literal sense whatever he might do, *πολλοὶ γὰρ διτες είγενεις εἰσῶν κακοῖ* (*Eur. Elect.* 551). (2.) In *Elect.* 532-3, the double pleonasm is removed by writing *οὐκ λοιποὶ καμῶν, ἐμοὶ | λιπαροῖς λιπαροῖς*, *ώσπερ ἡ τίκτοντος ἔγα*. (3.) In *Elect.* 548, *δ'* is changed to *τ'* because "in δοκῶ μὲν the particle never corresponds to a following δέ." If this dogma is true the Greeks certainly could not be misled by δέ *copulative* following, as there was no danger of ambiguity. (4.) In *Elect.* 947, *ἢ* is changed to *ἢ τι* because "ἢ denotes the means," and the general sense does not call for this. It seems rather to denote the manner: 'how I shall act'; and this is about the same as 'what I shall do,' so

¹ *Τινέσθαι* means 'manifestation' as well as 'becoming.' *Hdt.* 8, 86: *ἡσάν γε καὶ ἐγένοντο ταύτην ἡμέρην μακρῷ ἀμένοντες αὐτοὶ ἐωντῶν*, where Krüger *ἐγένοντο bewiesen sich durch die That.*

B. L. G.

that no change is necessary. (5.) Elect. 1139, *λοντροῖς σ' ἐκόσμησ'*: σ' not in the Laurent. if in any MS at all. Read *λοντρῷ σ'* (i. e. ΔΟΥΤΡΟΙΣ of the earliest MSS). (6.) Oed. R. 422, after the removal of *λημήν* from 420 it is proposed to read: *δν λημέν'* at verse-end instead of *δν δόμοις*, with the remark that the elision is but one more example of the *εἶδος Σοφόκλειον*. But any one introducing into the text such an elision is expected at least to allude to the question whether the last syllable must not be long. (7.) Oed. R. 586: read *ἀτρεστον εἴδειν*. (8.) Oed. R. 977: for *ψ* (Meineke *οἶς*, Blaydes *οὖ*) read *ῶν*. (9.) Oed. C. 45: for *γῆς* it is proposed to read *γ' ἐκ*, and a very unnecessary apology offered for leaving the verse "without caesura." In fact it has three, any one of which would suffice according to Sophoclean usage. (10.) Oed. C. 1027: for *κτῆματ'* read *'κτημέν'*. (11.) Trach. 159: for *οὖπω* (Laurent. *οῦπω*) read *οὐτω*. (12.) Trach. 345: for *χώ λόγος σημανέτω* is proposed *χώ λόγος σὸς βανέτω* with the remark that *λόγος σοι βανέτω* would violate the Porsonic law. But even *λόγος σὸς βανέτω* has so few parallels that it is to be avoided,¹ as being improbable, in making emendations. (13.) Trach. 1062: read *κλαναδρος*. (14.) Philoct. 76: *ῶστ' εἰ με τέξων ἐγκρατῆς αἰσθήσεται, | δλωλα καὶ σὲ προσδιαφθερῶ ξυνών.* "Le futur προσδιαφθερός ne va pas à côté du parfait à sens présent (!) δλωλα. Il faut certainement (!) rétablir le présent προσδιαφθείρω." These are the exact words of the entire criticism. Comments are unnecessary. (15.) Philoct. 296: . . . *εἴτα πῦρ ἀν οὐ παρῆν, | ἀλλ' ἐν πέτροισι πέτρον ἐκτρίβων μόλις | ἐφην' ἀφαντον φῶς.* Here it is proposed to read *εἰ μὴ 'ν* instead of *ἀλλ' ἐν* because "εἴτα πῦρ ἀν οὐ παρῆν paraît appeler au second vers la particule εἰ." But it is well known that instead of an unreal protasis, the opposite fact may be stated. The grammars cite prose examples, in which *δέ* happens to be used instead of *ἀλλά*. In Soph. Antig. 260 ff, there is an instance somewhat expanded, no distinct *ἀλλά*-clause occurring. In Eur. Elect. 1031 we read: . . . *οὐδὲ ἀν ἐκτανον πόσιν | ἀλλ' ηλθ' ἐχων μοι μανάδ' ἐνθεον κόρην, κτέ.* As this is not a question of dialect, Homeric examples are not inapposite: E 22-3: *οὐδὲ γάρ οὐδέ κεν αὐτὸς ἵπεκφυγε κῆρα μελαιναν, | ἀλλ' Ἡφαιστος ἐρυτο σάωσε δὲ νυκτὶ καλύψας* (with which compare Δ 750-753, where *εἰ μῆ* is used). In the Odyssey, φ 128-9: *καὶ νύ κε δή ρ' ἐτάνυσσε βίη τὸ τέταρτον ἀνέλκων, | ἀλλ' Ὄδυσσεὺς ἀνένευε καὶ ἐσχεθεν λέμενόν περ.* See also η 278-280, ι 79-80, μ 71-2, ξ 32-4. It is true that in tragedy examples are rare, but in the present case there was a special reason for introducing *ἀλλά* instead of *εἰ μῆ*, as the sentence occurs at the end of a series of general logical conditions in past time, with frequentative *δν* in the apodosis, and it was desirable to mark the distinction. (16.) Philoct. 748: *πάταξον εἰς ἄκρον πόδα* is questioned, and *εἰλ* suggested because the use of *εἰς* with *πατάσσω* "est insolite." How many times ought it to occur, and what preposition ought to be used when we wish to speak of striking *into* something? (17.) In Philoct. 786: *παπαὶ μάλ', ω πονές, οἰά μ' ἐργάσει κακή*, our emender proposes the fut. perf. *είργάσει*, which he prefers to Wecklein's *ἐργάζει*, because its sense is as appropriate and the form was more likely to be mistaken since it occurs nowhere else. But even if the MSS gave *είργάσει*, what would hinder any one from rejecting it as being "*insolite*"? It is a little curious, too, that the sentence "au lieu du futur *ἐργάζει* [sic], . . . W. a

¹ And the same thing is to be said of *ὸ λόγος σός*, which ought not to be emended into a text, despite *ὸ λυμεών ἐμός*. So. Ai. 573, and *ὸ γεννήτωρ ἐμός*. Eur. Hipp. 683, in both of which passages *ἐμός* is objective.

proposé ἐπύάζει" escaped the proof-reader, and the error was probably in the emender's manuscript. As a matter of fact, no emendation seems to be necessary, as the simple future in a mere exclamation is quite admissible under the circumstances. (18.) Philoct. 1293: for ὡς read ώ.

2. Pp. 148-155. Notes on the *Asinaria* of Plautus, by L. Havet. Seven passages emended. One of these (5, 2, 43-60) is elaborately discussed and rearranged. The article is worthy of attention.

3. Pp. 154-5. Various notes. (1.) Aristotle (ed. Spengel), p. 118, 1, 11: O. Riemann inserts λέγοντος after ἀγαμένως, and lower down condemns Spengel's cheap method of solving a difficulty by treating it as an "interpolation." Before δέ λέγων he rejects ὡς and the comma preceding it. (2.) Plaut. Capt. 3, 5, 36 emended by E. Benoist so as to read: Dum pereas, nihil interdico aiant vivere. (3.) Pacuv. Iliona v. 198, E. Benoist publishes the emendation of Guyet, 'filium' for 'natum,' and compares Plaut. Cistel. 2, 1, 48, where 'natam' must take the place of 'filiam.'

4. Pp. 156-160. Book notices, by Tournier, Thurot, Weil, Riemann.

5. *Revue des Revues*, pp. 1-96: Germany begun.

No. 3. Aug.

1. Pp. 161-178. Biographical sketch of Charles Thurot (with portrait), by Émile Chatelain.

François-Charles-Eugène Thurot was born at Paris, Feb. 13, 1823, and died suddenly in that city, Jan. 17, 1882. Educated at Paris in the *Collège de Saint-Louis* and at the *École Normale supérieure*, he held positions successively (1844-7) in the colleges of Pau, Rheims, and Bordeaux. In 1848 he taught Pedagogy in the *École Normale*, and in 1849 went to Besançon as Professor of Rhetoric. In 1854 he was appointed Prof. of Ancient Literature at Clermont-Ferrand. It was here that he began to write on the works of Aristotle, for whom he had a peculiar veneration. His familiarity with that author has probably never been equalled in our times. In 1861 he became *Maitre de Conférences* at the *École Normale*. His distinctive characteristic was that he carefully distinguished what he knew accurately from what he knew approximately or vaguely, and he taught only what he knew accurately. According to F. de Coulanges, "he knew the three [sic] classic languages as our best grammarians know one of them." In 1869 appeared his great work: "Extraits de divers manuscrits latins pour servir à l'histoire des doctrines grammaticales au moyen âge." In 1871 he was appointed to direct the study of Latin Philology at the *École des Hautes Études*, a position which suited him exactly. Here he guided his pupils in the critical study of many Latin works, paying much attention to the principles of textual criticism. In 1871 he entered the *Académie des Inscriptions et Belles-Lettres*, where his services were of a high value.

In addition to numerous works of his own (of which one of the most important is that on French Pronunciation, 1881), he prepared and published posthumous works of his father, François Thurot. Because of his minute knowledge of the middle ages, he was made a member of the council for the organization of the *École des Chartes*. His health first failed in 1877, when he had an attack of hemiplegia. He never regained his full strength. On the 17th of January, 1882, after a day's work, when retiring for the night, he died suddenly.

In 1880 Thurot had become an officer of the Legion of Honor and in 1876 a member of the Munich Academy of Sciences. He was distinguished as much for his kindness as a teacher and for the interest he took in his pupils, not only while under him, but also in their subsequent life, as he was for scholarship and literary activity. A complete list of his works including Review Articles would require eight or ten pages.

2. Pp. 179-185. On a Greek parchment of Egyptian origin, by H. Weil. This parchment, which is much injured, once formed a leaf in a *book* (not a mere roll, or file of leaves). It contains in a fragmentary state the second parabasis of the *Birds* of Aristophanes. As far as it is legible it agrees in the main with the oldest MSS. In v. 1078, where $\zeta\omega\nu\tau'$ $\dot{\alpha}y\dot{a}\gamma\eta$ of the MSS has been changed to $\zeta\omega\nu\tau$ $\tau\iota\dot{\alpha}\dot{\alpha}y\dot{a}\gamma\eta$ ($\zeta\omega\nu$, acc. of $\zeta\omega\nu$, attested only by grammarians), the parchment has $\zeta\omega\nu\tau'$ $\dot{\alpha}p\dot{a}y\dot{a}\gamma\eta$, which is, no doubt, the true reading. (Cf. $\dot{\alpha}p\dot{a}y\dot{a}\gamma\eta$.) Demosthenes (against Aristocrates, §30) cites a law which permits one to kill murderers or bring them before the magistrate: $\dot{\alpha}p\dot{o}k\dot{t}e\dot{\iota}n\dot{\iota}v$ $\kappa\dot{\alpha}\dot{l}$ $\dot{\alpha}p\dot{a}y\dot{e}v$, and in his oration against Timocrates he uses the expression $\dot{\alpha}p\dot{o}k\dot{t}e\dot{\iota}v$ $\kappa\dot{\alpha}\dot{l}$ $\dot{\alpha}p\dot{a}y\dot{a}e\dot{\iota}v$. So in the *Birds* we have (1077) $\dot{\eta}\nu$ $\dot{\alpha}p\dot{o}k\dot{t}e\dot{\iota}v$ $\tau\iota\dot{\alpha}$ and (1078) $\dot{\eta}\nu$ $\dot{\delta}\dot{\varepsilon}$ $\zeta\omega\nu\tau'$ $\dot{\alpha}p\dot{a}y\dot{a}\gamma\eta$. — In v. 1080, the word $\pi\ddot{a}\sigma\iota$, which spoils the verse as it is in MSS, does not occur. — In v. 1069 there is evidence that in the parchment the word $\pi\ddot{a}\nu\tau\dot{\alpha}$ stood after $\dot{\alpha}\dot{\delta}\dot{\kappa}\dot{\epsilon}\dot{\tau}\dot{\alpha}\dot{\tau}\dot{\alpha}$: a confirmation of Dissen's conjecture. The name of the principal person is $\Pi\dot{\epsilon}\dot{\iota}\dot{\sigma}\dot{\theta}\dot{\epsilon}\dot{\tau}\dot{\alpha}\dot{\tau}\dot{\alpha}\dot{\tau}\dot{\alpha}$ according to the parchment. — Vv. 1063 ff., which are suspected, appear as in the MSS. The only variant is $\dot{\epsilon}\dot{\phi}\dot{\iota}\dot{\zeta}\dot{\delta}\dot{\mu}\dot{\epsilon}\dot{\nu}\dot{\alpha}$ for $\dot{\epsilon}\dot{\phi}\dot{\iota}\dot{\zeta}\dot{\delta}\dot{\mu}\dot{\epsilon}\dot{\nu}\dot{\alpha}$. Weil proposes to divide the letters so as to read $\dot{\epsilon}\dot{\phi}\dot{\iota}\dot{\zeta}\dot{\delta}\dot{\mu}\dot{\epsilon}\dot{\nu}\dot{\alpha}$ $\dot{\alpha}$ $\dot{\kappa}\dot{\alpha}\dot{p}\dot{\tau}\dot{\alpha}$ $\dot{\alpha}\dot{p}\dot{o}\dot{\beta}\dot{\delta}\dot{\kappa}\dot{\epsilon}\dot{\tau}\dot{\alpha}$, with $\dot{\alpha}\dot{p}\dot{o}\dot{\beta}\dot{\delta}\dot{\kappa}\dot{\epsilon}\dot{\tau}\dot{\alpha}$ understood in the clause introduced by $\dot{o}\dot{\iota}$. — V. 1119: $\dot{\alpha}\dot{\lambda}\dot{\lambda}'$ $\dot{\omega}\dot{\epsilon}$ $\dot{\alpha}\dot{\pi}\dot{\delta}\dot{\tau}\dot{\alpha}$ $\tau\dot{\iota}\dot{\chi}\dot{\o}\dot{\nu}\dot{\alpha}$, not $\dot{\alpha}\dot{\lambda}\dot{\lambda}'$ $\dot{o}\dot{\iota}\dot{\kappa}$ as Dobree has proposed. — On $\pi\dot{\rho}\dot{y}\dot{\o}\dot{p}\dot{e}\dot{\dot{\alpha}\dot{\omega}\dot{\alpha}}$ (v. 1113) the scholiasts make comments in which $\pi\dot{\rho}\dot{\delta}\dot{\lambda}\dot{\beta}\dot{\o}\dot{\gamma}\dot{\o}\dot{\dot{\alpha}\dot{\omega}\dot{\alpha}}$ is treated as a synonym of $\pi\dot{\rho}\dot{y}\dot{\o}\dot{p}\dot{e}\dot{\dot{\alpha}\dot{\omega}\dot{\alpha}}$. But in the best MSS of Aristophanes and also of Suidas, who reproduces these scholia, $\pi\dot{\rho}\dot{\delta}\dot{\lambda}\dot{\beta}\dot{\o}\dot{\gamma}\dot{\o}\dot{\dot{\alpha}\dot{\omega}\dot{\alpha}}$ is read instead of $\pi\dot{\rho}\dot{\delta}\dot{\lambda}\dot{\beta}\dot{\o}\dot{\gamma}\dot{\o}\dot{\dot{\alpha}\dot{\omega}\dot{\alpha}}$. Now the parchment confirms this reading; for among some marginal notes occurs the following: **ΠΡΟΛΟΓΟΣ | ΗΤΩΝ ΟΡΝΙΘΩ | ΦΑΡΥΞ**. If we examine closely the scholia just mentioned it will become evident that $\pi\dot{\rho}\dot{\delta}\dot{\lambda}\dot{\beta}\dot{\o}\dot{\gamma}\dot{\o}\dot{\dot{\alpha}\dot{\omega}\dot{\alpha}}$ had this meaning. In the texts as at present punctuated we read: **Πρηγορεάνας: Δίδυμος τοὺς βρόγχους τῶν ὄρνέων, κυρίως τὸν λεγομένον προλόβον, οὗτοι συλλέγεται ταῖς στισίαις. Λέγεται δὲ καὶ ἐπὶ ἀνθρώπων πρηγορεάν πάλιν διβρόγχος.** **ἐκάτερον δὲ ἀπὸ τοῦ προαθροίζεν ἐκεὶ τὴν τροφὴν.** The comma should be placed after **κυρίως**: and it is evident that $\pi\dot{\rho}\dot{\delta}\dot{\lambda}\dot{\beta}\dot{\o}\dot{\gamma}\dot{\o}\dot{\dot{\alpha}\dot{\omega}\dot{\alpha}}$, i. e. $\pi\dot{\rho}\dot{\delta}\dot{\lambda}\dot{\beta}\dot{\o}\dot{\gamma}\dot{\o}\dot{\dot{\alpha}\dot{\omega}\dot{\alpha}}$, is represented as being derived from $\pi\dot{\rho}\dot{\delta}$ and $\lambda\dot{\epsilon}\dot{\gamma}\dot{\epsilon}\dot{\nu}\dot{\alpha}$, and $\pi\dot{\rho}\dot{y}\dot{\o}\dot{p}\dot{e}\dot{\dot{\alpha}\dot{\omega}\dot{\alpha}}$ (in the last clause) from $\pi\dot{\rho}\dot{\delta}$ and $\dot{\alpha}\dot{\gamma}\dot{\epsilon}\dot{\iota}\dot{\rho}\dot{\epsilon}\dot{\nu}\dot{\alpha}$. We must, therefore, assign $\pi\dot{\rho}\dot{\delta}\dot{\lambda}\dot{\beta}\dot{\o}\dot{\gamma}\dot{\o}\dot{\dot{\alpha}\dot{\omega}\dot{\alpha}}$ a new meaning.

3. Pp. 185-7. On *Sed (diadema) attuleras domo, meditatum et cogitatum scelus* (Cic. Phil. II 34, 85), by J. Gantrelle. The remarks of G. on this passage, published in the *Revue de Philologie* V 1, having been unfavorably criticized by the *Blätter für das Bayer. Gymnasialwesen* (1882, No. 3), the author shows that the *Blätter* confounded two very different things: a noun in apposition with a whole clause without reference to its relation to other clauses, and a noun in apposition with part of a clause or a subordinate clause, and partaking of its construction. The examples cited from Cicero in the grammars belong to the latter category. He cites an example from Sallust (Letter of Mithr., ch. IV) similar to the one in question.

4. P. 187. On the quantity of *e* in 'tabe,' by L. Harant. Criticism of O. Riemann's emendation (*Rev. de Phil.* IV, p. 185) of the common reading of Liv. XXI 39, 2, in which he corrected 'illuvie tabeque' so as to remove the example of 'que' after *ē*. Harant maintains that *e* is *long* in 'tabe.'

5. Pp. 187-8. O. R. replies to the above (4), and claims that 'tabē' is the correct quantity everywhere with the single exception quoted by Harant: *Lucr.* I 806.

6. P. 188. L. Havet proposes to emend *Quint.* I 1, 30 by inserting 'bene notis' or something of the sort after 'ipsis syllabis.'

7. Pp. 189-192. Book notices, by E. C. and A. Fécamp.

8. *Revues des Revues*, pp. 97-224: Germany (finished), Austria, Belgium, Denmark, United States, France (begun).

M. W. HUMPHREYS.

MNEMOSYNE, Vol. X, Part II.

In pp. 113-121 of this part Cobet concludes his notes on Madvig's edition of Livy. On XLIII 13, 1, he writes: "in Codice est: *non sum nescius ab eadem negligentia, QUA nihil deos portendere vulgo nunc credant, neque nuntiari admodum illa prodigia in publicum neque in annales referri*. Pro QUA Madvig substituit QUA. Nolle factum. *Negligentia est contemptus deorum, δλιγρία καὶ περιφρόνησις τοῦ δαιμονίου*. Bona pars hominum Livii aetate aut nullos esse deos credebat aut eos non curare quid ageret humanum genus. Livius igitur *impietatem* hanc esse dicere non ausus est sed leniore vocabulo *negligentiam* appellavit. Queritur Livius *eadem* negligentia neque *nova* prodigia in publicum nuntiari, neque *vetera* in annales referri. Illorum temporum historici Polybii exemplo has superstitiones aetatis nugas silentio praeteribant, Livius contra candidissimus mortalium bona fide credebat 'bovem foeminam locutam esse.' Quid putemus Senatoriis animi futurum fuisse si quis istius modi prodigium in publicum nuntiasset?" On the dependence of Livy upon Polybius he writes: "Livius ubi ducem suum Polybium deserit in graves errores se implicare solet. Miscet diversa tempora et ordinem rerum gestarum perturbat." After illustrating this he proceeds: "in multo graviorem errorem Livius et semet ipsum et nos inducit in fingenda oratione, quam Astydem in curia habuisse narrat. Toto coelo erat diversa ab ea oratione, quam re vera habuit. Astymedes, cui sua oratio satis placebat, scriptam eam in vulgus edidit. Polyb. XXX 4, ἐξέβαλε γὰρ ἔγγραπτον μετὰ ταῦτα ποιήσας τὴν σύνταξιν τῆς δικαιολογίας, ἡ τοῖς πλειστοῖς τῶν ἀναλαμβανόντων εἰς τὰς χεῖρας ἀτοποὶ ἐφάνετο καὶ ἀπίθανος. Maiorem enim orationis partem consumsit criminando alios qui peius etiam de Romanis meriti tamen omnes veniam adepti essent. Polybius, qui ipsam orationem legerat, graviter Astydem increpat. Livius, qui orationem non viderat (solent enim libelli huiusmodi cito interire) et Polybii immemor, longum et fleabilem legati orationem de suo commentus est ad misericordiam Romanorum excitandam. Multa in ea oratione sunt pravi et vitiosi acuminis et supra modum exaggerata. . . . Sed prorsus nihil horum in curia auditum est." At the end of the article Cobet notices some manifest imitations of Thucydides by Livy.

The next article (pp. 122-128) is by J. J. Hartman, entitled 'Euripidea.' He devotes his attention chiefly to the *Iphigenia Aulidensis*. In 521, for the

corrupt κοῦδέν γ' ἀχρηστον οὐδὲ χρήσιμον παρόν, he proposes: ἀπόν γ' ἀχρηστον, comparing Suppl. 867 and Hippol. 1001. In 1433 καραδοκήσω σήν ἐκεί παρονταν he suggests προθυμίαν. On 447-9 he writes: "Agamemnon hominum de plebe felicitatem praedicans, his verbis utitur:

καὶ γὰρ δακρῦσαι ἥδινας αὐτοῖς ἔχει
ἀνολβά τ' εἰπεῖν, τῷ δὲ γενναῖῳ φίσιν
ἀπαντα ταῦτα.

Multum in his versibus sudarunt critici. Probatur plerumque Musgravii conjectura, qui verba ἀνολβά et ἀπαντα locum inter se mutare jussit. Sed vehementer vereor ne ea multum proficiamus; quid enim sit ἀνολβά ταῦτα equidem non assequor. Malim, ne una quidem litera mutata, pro ταῦτα legere ταῦτα; videtur enim τῷ δὲ γενναῖῳ φίσιν ἀπαντα ταῦτα acerba breviloquentia dictum esse pro: viro nobili non licet ullos animi motus vultu vel voce prodere."

We have next, pp. 129-135, an article entitled *Observationes criticae in L. Annaei Senecae Dialogos et Epistolas*, by J. van der Vliet. On *ad Marc. de cons. XI 4*, he writes: "homo est corpus fragile et caducum 'precarii spiritus et male haerentis, qua parum repentinum audiet et improviso sonus auribus gravis excutit.' Est lectio sane corruptissima cod. A, ex qua Haasius haec effinxit: *qua partum repentinum auditus improviso sonus auribus gravis excutit.* Non opus est illius *partus repentinii* ineptiam multis verbis demonstrare. Etiamsi Latine ita scribi posset, de *feminis* tantum, neque de *homine* verum esset. Madvigius mirum in modum a solita prudentia et sagacitate aberrans, opem non a Deo ex machina, sed ab ipsa machina petivit. Sribit enim: *quem PETURUM repentinum aut auditus ex improviso sonus auribus gravis excutit.* Addit explicandi causa: 'ea erat machina, quae subito exsurgens et sublata homines ostentabat periculosa arte se moventes, apte ad spectatorem ex inopinato percutiendum.' Suspicer ejusmodi machinam idem fuisse quod apud nostrates κυβιστηρίας et illi, qui quos ipsi vocant, ludos *Icarios* ludunt, appellare solent het zwevende rek, vel Gallice, le trapèze volant. Cuiuscunque modi illa máquina fuerit, loco quoque nostro solita sua vice fungitur et lectorem ex inopinato percutit . . . Multo facilius et simplicius difficultas expediri posse videtur, si legerimus: *quem spectaculum repentinum aut auditus ex improviso sonus auribus gravis excutit.*"

In the next article, pp. 136-162, Naber continues his 'Euripidea.' On Hec. 246, ὃστ' ἐνθανεῖν γε σοὶς πέπλοισι χεῖρ' ἐμήν, he writes: "etiamsi fuerit tunc Ulysses τεθνηκὼς δεῖλια, quam inaudita synecdoche est, si manum suam timore intermortuam dixerit, non se ipsum," and proposes to read ἐμβαλεῖν. In Hec. 836, εἰ μοι γένοιτο φθόγγος ἐν βραχίσι καὶ χεροὶ καὶ κεμαῖσι καὶ ποδῶν βάσει, he proposes κνήμαισι: "κέμαισι ne Furiae quidem loqui possunt . . . Poterat Hecuba . . . manuum et pedum gesticulationibus fletum et animi dolorem significare." In Hec. 1155 he proposes κάνδων Θρύκιον for κάμακα Θρύκιαν. In his notes on the Phoenissae he says: "mihi quidem Phoenissae ex duabus tragediis contaminata fuisse videtur, ut Thebani belli quasi historia spectatorum oculis subjiceretur. Non urgeo quidem fabulam praeter solitum esse longam, nam est hoc argumentum nimis lubricum, sed illud contendeo, post pulcrum τειχοσκοπίαν in fabulae exordio et post vs. 751: δύομα δ' ἐκάστον διατριβῇ πολλὴ λέγειν, quibus verbis Eteocles Euripideus ridet Aeschyli Septem . . . post hos

igitur versiculos contendit eundem poetam in eadem fabula longam nuntii ῥῆσιν
inde a versu 1090, in qua septem ducum nomina et genus et insignia et fortia
facta accurate describuntur, si ipse addiderit, inepte addidisse." On the Sup-
plies he argues against Elmsley, who made out the chorus of fifteen by assum-
ing that Jocasta was allowed two maids while each of the other six ladies had
but one, that though Euripides often speaks of the seven leaders with their
mothers, there were really only five present, as the corpses of Amphiaraus and
Polynices "neque afferri possunt neque afferuntur . . . ut quindecim choreutarum
numerus expleatur, satis est credibile unamquamque matrem *binas* habuisse θερα-
παινας." In this article there are many interesting notes on these plays, and
also on the Heraclidae and Hercules Furens.

Then follows an article (pp. 163-177) by van Herwerden on the Batrachomyomachia, the object of which is to show in opposition to Baumeister, who follows in the main the opinion of O. Müller, Bergk, and Bernhardy, that this poem cannot be attributed to Pigres the Carian, nearly a contemporary of the Persian war, but "esse pseudepigraphum et ante Alexandri Magni aetatem
pangi neutiquam potuisse." In his examination he throws out of account the
lines bracketed as spurious by the latest editor J. Draheim, and scrutinizes
minutely the metre, the prosody, and the diction of the poem. On the employ-
ment of the metre he thinks "nihil concludi posse de aetate qua poeta vixerit
. . . quod aetate Alexandrina externam illam, ut ita dicam, artem a multis felicissime
cultam esse constat." But as to prosody "longe poeta noster discedit
a veterum epicorum norma in frequenti brevium vocalium correptione ante
mutam cum liquida, quam illi nisi parcus et plerumque in certis quibusdam
vocabulis admittere solebant." But the question is fully settled by the diction.
His conclusion is: "vix igitur ullum exstat in Graecis litteris opus quod tot et
tam manifesta serioris originis gerit quasi fronte inscripta indicia quam Batrachomyomachia,
quod carmen spero fore ut nemo posthac ad veterem poetam
Graecum auctorem referat."

The next article (pp. 178-192) is by Cobet, and contains notes on Galen. He
does not confine himself to passages which need correction, but cites many which
are of interest on various accounts. "Saepe queritur Galenus corporum huma-
norum resecandi sibi copiam et facultatem non esse, quam ob rem simias et alias
id genus bestias resecare satis habebat. Itaque operae pretium esse putavit
narrare ea quae leguntur Tom. ii, p. 221: ἐθεασάμεθα δέ ποτε καὶ ληστοῦ σκελετὸν
ἐν δρει κείμενον δλίγον ἐξωτέρω τῆς ὁδοῦ, δν ἀπέκτεινε μέν τις ὁδοιπόρος ἐπεγχειροῦντα
πρότερον ὀμόσε χωρίσας, οὐκ ἐμελλε δὲ θάψειν ὄνδεις τὸν οἰκητόρων τῆς χώρας ἐκείνης,
ἀλλ' ὑπὸ μίσους ἐπέχαιρον ἐσθιομένῳ τῷ σώματι πρὸς τὸν οἰωνὸν, οἵτινες ἐν δυσπὶ¹
ἡμέραις αὐτοῦ καταφαγόντες τὰς σάρκας ἀπέλιπον ὡς εἰς διδασκαλίαν τῷ βούληθέντι
θεάσασθαι τὸν σκελετόν." "Admirabundus narrat Galenus Tom. iv, p. 361: ἐναγ-
χός τις ἐν δακτυλίῳ Φαέθοντα διέγλυψεν ἐπὶ τεσσάρων ἵππων ὁχόνμενον, ὃν ἐκάστον
καὶ χαλινοὶ καὶ στόματα καὶ οἱ πρόσθιοι τῶν ὁδόντων καὶ ποδῶν ἐμοὶ μὲν οὐδὲ ἐωράντο
τὴν ἀρχὴν ὑπὸ σμικρότητος εἰ μὴ περιστρέψαιμι τὸ θέαμα πρὸς αὐγὴν λαμπράν. Myr-
mecides et Callicrates τέθριππα ἐποίησαν ὑπὸ μνίας καλυπτόμενα teste Aeliano
V. II. i 17, ubi interpretes et alia attulerunt et Plinium H. N. xxxvi 4, 15:
Myrmecides, cuius quadrigam cum agitatore cooperuit alis musca." A passage
is quoted (Tom. v, p. 655) on the subject of Stichometry, from which it appears
that "τοὺς στίχους sive τὰ ἐπη totidem constare syllabis, quot versus hexametri conti-

nent . . . et non litteras sed syllabas numerari solere." "Lepidum proverbium ex aliquo comico poeta sumtum solus nobis servavit Galenus Tom. v, p. 878: πρὸς ἀπάντων σχεδὸν ἀνθρώπων ἀδεται· παχεῖα γαστὴρ λεπτὸν οὐ τίκτει νόον."

The next article (pp. 193-210) is also by Cobet on Bekker's edition (1849) of Dio Cassius. A considerable number of the corrections proposed here are found already in the Teubner edition, Dindorf, 1863. But the whole paper is full of interest. "Dio Cass. 38, 17. Cicero τρισχιλίους καὶ ἐπτακοσίους καὶ πεντήκοντα σταδίους ὑπὲρ τὴν Ράμην ἔξωρισθη. Vertunt: 'ultra 468 millia.' Mirificus sane numerus, sed quia Dioni ubique *mille passus* non sunt *octo stadia* sed *septem cum semisse* vertendum est *ultra quingentesimum lapidem* ($500 \times 7\frac{1}{2} = 3750$). Cicero ad Atticum III 4, *in rogatione de pernicie mea quod correctum esse audieramus erat eiusmodi ut mihi ultra quadringenta millia liceret esse quum in priore rogatione *ultra quingentesimum lapidem* esset scriptum. Sic Dio pro *intra mille passus* dicere solet μέχρι ὡρῶν ἡμισταδίουν et ἐντὸς ὡρῶν ἡμισταδίουν Lib. 54, 6, 6, et pro *ultra centesimum ab Urbe lapidem* dixit Lib. 46, 44, 4, ὑπὲρ πεντήκοντα καὶ ἐπτακοσίους σταδίους ἀπὸ τῆς πόλεως."* "Quam facile historiae fides mendaciis et absurdis commentari corrumphi possit ostendit locus Dionis Cassii 45, 1, 2, de Atia, matre Augusti: ἡ Ἀτία, inquit, ΔΕΙΝΩΣ ΤΣΧΥΡΙΖΕΤΟ ἐκ τοῦ Ἀπόλλωνος αὐτῶν (*Augustum*) κεκυρκέναι ὅτι καταδαρθοῦσά ποτε ἐν ναῷ αὐτοῦ δράκοντι τινὶ μίγνοσαι ΕΝΟΜΙΣΕΝ καὶ διὰ τοῦτο τῷ ικνονυμένῳ χρόνῳ ἐτεκεν. Quis ad haec non firmiter credit ipsam Atiam sanctam matronam hoc absurdum commentum diserto suo testimonio confirmasse? Tamen nihil est minus verum et numquam Atia quidquam de his nugis inaudivit, nedum ipsa narravit. Dio in his omnibus nil nisi Suetonium Graece vertit idque satis negligenter. Suetonius in *Augusto* haec scripsit: 'in Asclepiadis Mendesii θεολογομένων libris lego Atiam cum ad solemne Apollinis sacrum media nocte venisset posita in templo lectica OBDRMIVISSE draconemque repente irrepisse ad eam paulloque post egressum illamque EXPERGЕFACTAM quasi a concubitu mariti purificasse se, . . . Augustum natum mense decimo et ob hoc Apollinis filium existimatum.' Optime Casaubonus ad h. l. 'oportet hominem (Asclepiadem) fuisse nugatorem magnum et, quod de Timaeo olim dictum, γραουλλέκτριαν ineptum qui ausus sit, fortasse solus, de Augusti conceptu fabulam anilem ut rem veram memoriae tradere.' Quid igitur Dione facias qui de impostore Aegyptio verbum unum non facit, sed ipsam Atiam inducit δεινῶς ισχυριζομένην haec ita facta esse?"

The last article also in this number (pp. 211-224) is furnished by Cobet, *ad Appianum de bellis civilibus*. Room can be found for only a single extract. "Lib. iii 16, 41: Μάριος μὲν . . . ἀνηρέθη ἀνδροφόνους δὲ ἐκφεύγειν Υπερεῖδες, et post pauca: Δέκμον τὴν ἐγγὺς Κελτικὴν ΥΠΕΡοράτε ἔχοντα. In omnibus libris ὑπερορᾶν et περιορᾶν confundi solent. Non est tamen difficile distinguere, nam ὑπερορᾶν est *despicere, contemnere, περιορᾶν* autem *sinere pati*. Itaque restitendum ἐκφεύγειν ΠΕΡΙεῖδες *elabi passus* es, et ΠΕΡΙοράτε ἔχοντα *habere sinitis*. Apud veteres (praeter Thucydidem [et Herodotum]) περιορᾶν constanter cum participio componitur: apud sequiores promiscue cum participio aut infinitivo."

C. D. MORRIS.

¹ See *Apostol. V 22a* (*Corpus Paroem. Graec. II 337*) where von Leutsch has cited a number of sources. 'Senarius,' he adds, 'a poeta tragicus prefectus videtur, quum inter praeclera tragediae antiquae praecepta collocatus apud Gregorium Naz. carm. iamb. 18, 588, inveniatur. The verse has been a stock quotation for many years in the editions of Persius I, 57. B. L. G.

CORRESPONDENCE.

ON THE REV. L. F. MILLS' EDITION OF THE GÂTHÂS.

Sir: While abroad last summer I met in Tübingen the Rev. L. F. Mills, an American who has for many years been engaged upon important work on the Zoroastrian *Gâthâs*. The *Gâthâs* are the most archaic part of the Zend-Avesta, contained in that one of its four books, or rather collections, which is called *Yâzna*. They are hymns in metrical form, and seem to represent particularly that part of the Avesta material which was employed for liturgical purposes and was recited at sacrificial performances. In this sense the *Gâthâs* are directly comparable with the mantra material of the *Vedas*. The form of their language is also one which in a general way holds the same position with reference to the rest of the Avesta (the 'younger Avesta') as that which is occupied by the mantras of the *Veda* with reference to the remaining Vedic language. But they are far less natural and simple than the Vedic hymns; they are philosophizing, moralizing compositions, unlike the Vedic hymns, which are fresh, natural prayers of simple-minded singers to a divinity through whose aid they wish to accomplish some plain practical purpose. The exegesis of the *Gâthâs* is beset with the gravest difficulties, and the opinions as to the method by which they are to be investigated are very much divided; the differences of method depend largely upon the degree of importance which is attached to the native tradition, and to the extent to which the closely related *Vedas* (especially the *Rig-Veda*) of India are resorted to for light upon the language, the mythology and the thought of the *Gâthâs*. Prof. Roth of Tübingen, who first freed the exegesis of the *Veda* from the trammels of native tradition, is the most prominent advocate of an exegesis of the *Gâthâs* out of themselves, and with the help of the *Veda*, relegating the native Parsi tradition to a place of secondary importance. His pupil Geldner is the most active promulgator of his views.

Mr. Mills became interested in Zoroastrianism through philosophical and theological studies, and has spared neither time nor labor in the task which he has undertaken. His edition will include the text of the *Gâthâs* in Avestan character and in transliteration; a verbatim Latin translation, and a free metrical English rendering; the transliterated Pahlavi version with critical notes and translation; Nerosengh's Sanskrit version in transliteration and translation, and the transliterated Persian Pahlavi, which he describes below. This is to be followed by an elaborate commentary, in which the opinions on every point, both native and European, will be reported; in addition to this there will be glossaries of the Pahlavi, Sanskrit and Persian words, and a complete Index Verborum to the *Gâthâs* themselves, with references to the explanations of each word.

Mr. Mills has had in this work the aid of some of the most prominent Iranian scholars, and brings to his task, in addition to his long and close studies, very valuable new manuscript materials for the Pahlavi version. It seemed to me

that a more detailed statement of his methods and aims would interest the wider philological public of his native country, and accordingly he has sent at my request a statement, which is printed below in full; nothing but a communication to the American Oriental Society, at its meeting in Boston, May, 1881, has preceded this.

MAURICE BLOOMFIELD.

Being invited to make a communication on the particular branch of labor on which I have been for nearly eight years engaged, I experience some embarrassment. First, I am obliged to suppose that those who extend the invitation regard my work as practically in existence,¹ as containing the original matter claimed for it, and as having been reviewed previously to publication in a manner in which, in some respects at least, no subsequent revision will be likely, or possible, to be made of it. Secondly, as I desire to occupy only a limited space, I must beg of my readers to excuse abruptness, and above all to overlook any appearance of dogmatic assertion. The Gâthâs of Zarathushtra, as need hardly be said, once constituted, together with the remaining portions of the Avesta, an important force in general mental and religious development. They are not only impressive objects in history, but the actual source of the philosophical dualism, and of much else that is alive at the present² day. It is clear to the minds of many, most competent to form an opinion, that some of the most prominent, as well as beautiful, ideas in the Jewish and Christian scriptures find their origin in the Avesta, and were embodied in Jewish thought while Jerusalem was substantially 'a Persian city.' The Gnosis with its profound³ suggestions is indebted to it, as is, to pass over centuries, modern philosophy. A critical knowledge of it is therefore essential to the history of theology. For the student of religion the interest is even greater. Here we have the purest pagan religion of antiquity, under the guidance of which multitudes of human beings have gone through life, and that during a period of, perhaps, 3000 years. As to 'puerilities,' that any observer should pause to notice, what is shared by every ancient religion is more wonderful than the 'puerilities' themselves! For philology the Avesta is all-important. Its language is nearer the Vedic than it is to the Sanskrit, and nearer the original Aryan, in some respects, than the Vedic is. On the Gâthâs, the oldest and most important part of the Avesta, good labor has been expended; but the subject has presented such enormous difficulties that no one work, covering all the ground, has ever been attempted. The Asiatic word for word translations upon which all others have been founded, although honest efforts, of course contain no extended philological discussions, nor have they themselves been rendered into any of the European languages till now. The ancient Pahlavi translation which, notwithstanding its seeming, or real, inaccuracies, is, for philosophy and the history of religion, a production in itself second in importance to its original only, has never been continuously translated into any European language further than

¹ The texts and translations, some 400 pages, will be nearly all in type by the time that this is read.

² I regard the prevailing philosophy, which recognizes the necessity and eternity of evil, as clearly dualism, except indeed where the evil is regarded as supreme.

³ Compare the purer Gnostic systems.

to about one-fourth of its contents. One reason for this deficiency has been the supposed state of the text. It was even thought, and a leading writer expressed to me the opinion, that with the text as it was, 'one could not even begin.' (This was, however, hypercriticism.) Every prominent author mentions the need, while none now living has attempted to meet it further than to the extent which I have indicated. With Neriosangh's Sanskrit translation it is much the same case. It has never been translated in its entirety into any European language, while from ignorance of even such a fact as that it follows the Pahlavi, it has been in some cases wholly misread. Haug criticized it severely, treating it as an original rendering of the Gāthās,¹ thereby subjecting himself to still severer criticism in his turn. The entire evidence of these ancient works, so far as it should have influenced many active writers, has therefore been practically lost. The ignorance is a darkness which may be felt. The laborers have been too few. They have imagined that because these ancient works are often inaccurate (as if any modern could escape *that* imputation!), therefore all their irrefutable indirect evidence might be safely laid aside. Such is not the opinion of the greatest of Sankritists. It is, as I have intimated, the convenient oversight of men who have had too much to do. They have left an enemy in their rear. To get a distinct conception as to what the Pahlavi translation really is, we must by no means select the obscure passages, expecting grammatical accuracy in them. We must count the number of times from the beginning in which the renderings have been justified by criticism. If the accuracy (as to the radical meanings) preponderates greatly, then without being so foolish as to follow the Pahlavi always, we must yet recognize that we are in the presence of something which we are obliged to respect, or else fall justly under the imputation of having done our work without mastering our materials.²

And such has been the unconscious decision of science. Where Haug rejected the Pahlavi (as rendered by Neriosangh, through whom alone he was, at the time of his writing, really acquainted with it) his successors have often rejected him, acquiescing in the hints or plain teachings of the Pahlavi, but alas! without knowing it. The ancient scholars had opportunities for knowing what the Gāthās meant, which no subsequent scribe will ever be in possession of, and we shall continue to make sad work till we heed them, and learn how to sift out their truths from their errors.

As I am indulgently asked for some particulars as to my studies, let me entreat forbearance with the frequent but necessary use of the first person sin-

¹ This assertion is clearly true to me and beyond a doubt. See Haug's notes everywhere.

² In estimating the Pahlavi translation the following points are to be considered. The first and most obvious question is whether the translator had our text, or not. I regard it as far from certain that many of his, or their, supposed errors (for more than one man's work is doubtless in it) are not improvements instead of errors, being renderings of a truer text. But secondly, occasional, and even frequent individual errors must be freely admitted. They are often, however, due to an over-anxious veneration for a sacred text, and the desire to render every syllable; sometimes from a reason diametrically the opposite, that is, from carelessness; but neither of these defects, grave as they are, implies continual incapacity. Thirdly, it is plain from criticism that all the defects of the translators have not been able to destroy the general meaning; but then the general sense is all that we need. The Gāthic text affords the grammatical relation. Fourthly, it seems to me quite absurd to suppose this translation to be the product of original scholarship under the Sasānides. Its proper origin is very much more ancient.

gular. Having devoted three years to severe labor upon the *Gnosis*, and the *Critical Philosophy*, bringing a work on *Kant* to within a year of publication, I turned in the spring of 1875 to examine the Zoroastrian dualism which led to my present subject. After preliminary studies I made a first tentative translation, collecting the opinions of my predecessors, so far as they were then known to me, in the form of a commentary, and citing at length all the passages of the *Avesta* bearing upon the *Gāthās*. This occupied about three years. Coming to Germany from Italy where I began on this branch of labor, I determined to translate the whole of the as yet untranslated *Pahlavi*. Experiencing the usual difficulties from the indefiniteness of the character, I sought counsel from a professor who, from the seriousness of the undertaking, referred me to Dr. West, the leading authority on *Pahlavi*. Writing to Dr. West on the introduction of Conte Prof. A. de Gubernatis, of Florence, I met with a reception which has proved as important for my pursuits as it was grateful to my feelings. Dr. West offered me the rich stores of his experience, and also, what was all-important, the materials for correcting the imperfections of the Copenhagen Manuscript as edited by Prof. von Spiegel. It seems that Dastur Jamaspji Minochiharji Jamaspasand lent to Dr. West, while living in the East, his most valuable, or rather invaluable, MS of the *Yasna*, which was written only twenty-two days after that now deposited in Copenhagen, brought to Europe from India by Rask in 1820. Dastur Jamaspji's MS is also by the same hand. It was written A. D. 1323. This precious document West carried with him "half over India." While it was in his possession it occurred to him to compare it with Spiegel's text from K's, which he had with him. He did so, and noted the differences in blue lead-pencil immediately over the letters concerned; this was in 1875. This volume so corrected he offered and lent to me in 1879. It was in my possession for a month, during which time I transcribed all its notes into my own copy of Spiegel, carefully reviewing them a second time. Encouraged by this, I examined the MSS bequeathed by Haug to the great Library in Munich, and obtained, from the courtesy of Prof. Dr. von Halm, the Chief Librarian, the loan of 12 b, a *Pahlavi* manuscript of the *Yasna* text in Persian characters with Persian interlinear translation. This was sent for my use to the Royal Public Library at Stuttgart. It is not positively known from what source precisely this MS was derived. It is thought that its original was one of the documents collected for the completion of Aspediarji's *Gujerati* translation of the *Yasna* made in 1843. Aided by these two new sources of information, I began on my first translation and text of the *Pahlavi*, working over my *Gāthā* translation continually. This accomplished, I began on Neriosangh's *Sanskrit* translation, which I had, as a matter of course, continually consulted and cited from the first. Now I determined to translate it, as no continuous translation of it existed, or exists, and as the fragments hitherto rendered, from their very nature as fragments, do not grapple with the chief difficulties. Those in Haug's *Gāthās* may be regarded as substantially retracted by him. See the Essays, page 41. He there speaks of the 'bad transcript' which he had of Neriosangh. It was at this time, if I remember rightly, that I came to this town hoping to meet Prof. von Roth, but to my lasting regret he was absent. A translation of Neriosangh being accomplished with constant and literal comparison of the *Pahlavi*, I began a retranslation of the latter. In the meantime I became more and more struck

with the value of Haug's Persian MS. It corroborated West's notes of Dastur Jamaspji's MS to a remarkable degree, while at the same time it differed sufficiently often to show independence of origin. At length I concluded to decipher and edit the whole with glossary. It was at this time that I met Darmesteter in Paris, and I must express heartfelt acknowledgments for much kindly encouragement, and for the generous advice urgently given that I should print the text of Neriosangh as well as my translation of it. A kind word from de Harlez somewhat later, together with the presentation of his valuable work, is also gratefully acknowledged.

Having removed to Hannover, Prof. von Halm, with great liberality, allowed Haug's MS to follow me. I deciphered the whole save some forty words, which I referred to West. Of these he made out at least twenty without difficulty, some ten he abandoned, while the rest he read, for the most part, differently from the manner in which I have finally given them. Several interesting words, some of them not without difficulty, he made out originally and before me, I having sent him some nine verses for another purpose. This done, the translation of the Gâthâs was once more rewritten, and this time in Latin, as a word-for-word translation in English for the public eye is practically impossible. For the free metrical version (in English) I adopted a popular method, abjuring critical imitation of the Gâthâs for practical reasons. (I present exact imitations of rhythm together with amended text in the notes.) From 43-50 I use nearly the trishtubh rhythm, leaving off a syllable in the fifth, and from 47-50 (inclus.) in the fourth, line to improve the popular impression. That the Vedas have been compared should be understood without statement. A study has been made of them by a rough, hasty word-for-word translation of about five hundred of the shorter ones after the known authorities, together with a careful writing out of the principal Vedic verbal roots, stems and forms. Completing a third translation of the Pahlavi, and a second of Neriosangh, and desiring to forestall incompetent criticism, I visited West in the summer of 1880. With a kindness which I can never forget he gave me an entire month of his valuable time, reviewing my Pahlavi translation closely, and my Persian text somewhat. I may say that, aside from oversights, he agreed with my conclusions as much as one person could well agree with another while laboring independently on matter so difficult. I am, however, far from wishing to give the impression that either Dr. West, or other kind friends who have examined my work, are responsible for the individual opinions. Unanimity on the Avesta is never to be expected. Otherwise originality must be sacrificed.

There can hardly be said to be more than two or three individuals who have studied text, Pahlavi, Neriosangh, Persian and Gujrati together. The leading specialist in Pahlavi has been obliged to omit close labor on the Gâthic text, while some of the foremost writers on the Avesta have given next to no attention to the Pahlavi. Such is the 'state of Zend philology.' And such is the severity of the subject that it is by no means a disgraceful state. Let it be noted that each of the texts with which I have labored, except that of the Gâthâs, is in an irregular form. The Pahlavi is often turned out of its natural order by following the metrical original. Neriosangh's Sanskrit is the more puzzling from the same circumstance, and from being very bad in style, while the Persian is mixed, and has undefined pronouns like the Pahlavi. Nothing looks easier

than to read each of them off-hand, and nothing is more certain than such a reading will be erroneous. Travelling back to Hannover, I stopped at Erlangen, and was more fortunate than on a previous occasion, for I found Professor Spiegel there. Professor Spiegel received me with characteristic courtesy, and offered me his original copy of the Copenhagen MS of Neriosangh, which was made by him in 1845, he having gone to Copenhagen at the expense of the Bavarian Government for the purpose. It was afterwards compared by him with the chief Paris MS, and the results noted in red ink. I have therefore, through this generous loan, not the notes of a collation merely, but an actual copy of the chief manuscript entire, and this collated with the MS which occupies the second position. These I have carefully compared with Spiegel's published text, and, as was to be expected, beyond a very small number of the unavoidable oversights, I have been unable to improve upon it. I have, however, added many changes in brackets. Professor Spiegel likewise most kindly consented to look over my translation of Neriosangh. As he has had more opportunities for comprehending that writer than most others, I was particularly gratified both at his reading my MSS, and at the too indulgent result. Finally, when I had some 300 pages in type in May of this year, I visited Professor Justi in Marburg, meeting him for the first time; and great has been my regret that I did not make his acquaintance earlier. With very great kindness he laboriously read my work, so far as it was then printed, with the same indulgent result as that reached by the others. I fear the lay-world have been much imposed upon by Haug's most culpable attack upon Professors Spiegel and Justi. Spiegel's extensive services speak for themselves, bringing over the whole subject from France, editing and translating the Avesta, and editing Pahlavi texts, and Neriosangh, etc. He is properly the father of German Zoroastrianism. As to Professor Justi's dictionary, notwithstanding the necessary blemishes of a pioneer work, every Zend specialist knows its great worth. Prof. von Roth (see the *Zeitschrift der deutschen morgenländ. Gesellschaft*, Vol. XXV, page 1) speaks of it as "Justi's musterhaft zweckmässig eingerichtetes Handbuch."¹ Having said this much, I will not be misunderstood when I acknowledge that, on some great questions, I belong rather to the school of Haug, or at present of Roth. Having done what I could to exhaust our Asiatic predecessors, I feel that I have now the right to compare the *Vedas* freely, with the language of which I bring the *Gāthās* into the closest connection. For my views as to the age of the *Gāthās*, and the place of their origin, see the remarks of Professor Luquiens in the *Proceedings of the American Oriental Society* held in Boston of this year, p. xl, l. 37. With these I closely concur. Professor von Roth has done great service in insisting upon the reconstruction of defective texts. Too many passages of the very highest interest are marred by some impossible grammatical forms at their close or beginning. As the ancient sage and his followers most certainly did not write nonsense, these sentences must be restored

¹ That a Zend dictionary should need to be rewritten after twenty years, surprises no specialist. It is only wonderful that Justi's results are so lasting (compare the errors of Haug). Justi's grammar alone would have made the reputation of some of his successors, and some of the finest original distinctions which have been advanced are to be found in his dictionary. It seems to me particularly contemptible that tyros should be taught to have their fling at Prof. Justi, when from the extraordinary difficulties and uncertainties of the Zend, no other person could have done better.

the best way that is possible. I may here express my great indebtedness to this eminent scholar for continual kindnesses which I have been receiving from him for some months past, and from his able pupil, Dr. Geldner. If I am forced to render the Gâthâs somewhat more according to the hints of the Asiatics than Prof. Roth does, it must at the same time be acknowledged that it is wholesome for the science to have renderings first from one standpoint and then from the other. Possibly some successor may construct a conclusive translation out of our materials. If the eminent Professor Roth can say that a translation which he makes 'is only a beginning,' how much more should the rest of us be modest. To rescue my labors from insignificance I am obliged to give them the following somewhat lengthy description. The Gâthic text is given in the original character and in transliteration, with a word-for-word Latin translation under the text, and opposite, a free metrical one in English; the Pahlavi text is then added, as for the first time edited with collation of MSS, and for the first time translated in its entirety into a European language; then Neriosangh's Sanskrit text, with a first translation; then the Persian translation contained in Codex 12 b of Haug's Munich MSS, edited with commentary to all, and Sanskrit, Pahlavi and Persian glossaries. I also hope to add the Pahlavi in the original character. When the second volume will be actually ready for circulation it is difficult to say. Some of the items above-mentioned involve an enlargement of plan. I have often assured myself that only mechanical drudgery remains, but mechanical drudgery, which no pupil can relieve, involves a great consumption of time. I believe that I have devoted as much labor to this one particular subject as any one now living, but it becomes a person pretending to write upon the Gâthâs, and as yet un-introduced by any work on the subject, to proceed with caution.

L. H. MILLS.

TUEBBINGEN, October, 1882.

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The Gebrüder Henninger of Heilbronn, a house conspicuous for its publications in modern philology, announce for Easter next the first volume of *Κρυπτάδια*, *recueil de documents pour servir à l'étude des traditions populaires*. Orders must be sent to the publishers themselves.

The appearance of the seventh edition of Liddell and Scott's Greek Lexicon (New York: Harper & Brothers, 1883) is worthy of special mention. In the preface the editors say that the whole work has been thoroughly revised and large additions made. Another edition is not likely to appear in the lifetime of the editors, as they say not without a touch of pathos, and it is especially important that the thoroughness of the revision be put to the test and errors recorded. Communications to the Journal on this subject will be considered. In any case the book is indispensable for present use and for the construction of the Greek-English Lexicon of the future. As one of the American contributors, the editor of this Journal has elsewhere protested against the unfair and inconsiderate manner in which his work has been treated, and he does not desire to introduce the subject into these pages, from which everything purely personal should be excluded. One mistake, however, which the editors have made under *ἐστε* (p. 587, col. 2, l. 16), one of the American articles, is so flagrant that it is especially undesirable to have it set down to American account. L. and S. have: 'd. with aor. inf. in oratio obliqua and the like for opt., *ἐστε αἰτήν νέμεσθαι Κρῆτας* = *ἐστε αἰτήν νέμοντο Κρῆτες*, *Hdt. 7, 171*; often in later writers.' Of course one part of this statement corrects itself: *νέμεσθαι* is not an aorist inf. But apart from this, no indicative temporal clause can be turned into the optative of oratio obliqua, and *νέμεσθαι* here represents the indicative (comp. Philostr. *Apoll. Vit. 3, 14*, p. 70: *ἐστε* — *ἐπιψεμελῆσθαι*). The passage is interesting as showing the power of association. 'Eστε of time up to which

(until) is rarely employed with durative tenses, but ἐρημωθείσης precedes and makes it easier. The passage reads: ἀντὶ τούτων δέ σφι ἀπονοστήσασι ἐκ Τροίης λιμόν τε καὶ λαούδην γενέσθαι καὶ αἰτοῖσι καὶ τοῖς προβάτοισι, ἔστε τὸ δεύτερον ἐρημωθεῖσης Κρήτης μετὰ τῶν ὑπολοίπων τρίτους αἰτήν νῦν νέεσθαι Κρήτας. It will be noticed that the intrusion of νῦν gives a twist to the whole passage. So ἔστε is used with the imperf. indic. in the sense of 'until' in Soph. Antig. 415, but an aorist precedes: ἐστ' ἐν αἰθέρι... μέσω κατέστη λαμπρὸς ἥλιον κύκλος καὶ καίμ' ἐθαλπε. So πρίν is used with ἀγεν, A 98, but δόμεναι precedes. So in So. O. C. 1024: οὐ μή ποτε | χώρας φυγόντες τῆσδ' ἐπενχωνταί θεοῖς the participle satisfies the demand for the aorist, and the present subj. may be defended. This class of phenomena is much larger than might be supposed, and deserves a more careful treatment than it has yet received.

ERRATA.

Pp. 47, 49, 51, head-line, read THE CHANGE OF ϕ .

P. 83, l. 8 from top, for "often" read "offer."

P. 198, l. 20 from top, read "Mem. 2, 1, 8."

P. 198, l. 27 from top, read "ἀμα."

P. 228, l. 19 from bottom, for "Thuk. 5, 7" read "5, 65."

P. 317, l. 17 from top, read "28 May-9 June."

P. 318, l. 11, read ἐναλλάξ φορ[μηδ]ὸ[ν]. See Fabricius, Hermes XVII 4, 563. It is due to Prof. M. W. Humphreys to say that in a private letter to the editor he suggested φορμηδόν without knowing that, according to Fabricius, the φ is plainly to be read in the photograph.

P. 319, l. 10 from top, for "δυο-ιν" read "δυο-ιν."

P. 333, l. 15 from top, for "sem. suffix ya" read "sem. suffix ya." A similar misprint occurs p. 336, note, where read "χορ-γ-αδ-γ."

On p. 441, note.—After I had printed my article, I found that Mr. Monro had not altogether disregarded the examples of ὡς ὅτ' ἀν as one would have been led to suppose by his unqualified statement (p. 51) that "the use of ὅτ' ἀν in a simile is not Homeric," for on p. 209 he quotes a few instances of ὡς ὅτ' ἀν, and conjectures that the word was ἀνά in a sufficient number of places to form a type and to lead to confusion between an original ὅτ' ἀν and the ordinary ὅτ' ἀν. Surely this looks like a desperate effort to save the statement on p. 51, and, if Mr. Monro had entertained this view when he wrote p. 51, he ought not to have kept it back.

The editor of this Journal has too much respect for Cobet to venture upon doctoring anything he writes. His spelling and his grammar are scrupulously preserved. If any one asks about 'nendum narravit' and 'γραοσυλλέκτριαν inepitum' he must quarrel with Mnemosyne or Mnemosyne's proof-readers.

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NEW TESTAMENT AUTOGRAPHS

BY

J. RENDEL HARRIS

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лалнсаинанъарау
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P R E F A C E.

A few words of introduction are necessary to the investigations contained in the following pages, in order to remove some of the perplexity which may hang around the enunciation of the theory which they contain.

In the course of an examination of the columnar arrangement of the text of the oldest MS of the New Testament, my attention was drawn to a remarkable numerical peculiarity in the arrangement of the lines and columns of the several books, and from this my mind was forced to the conclusion that the scribes of the New Testament produced epistles more uniformly written and at the closing page more frequently filled than is the custom at the present day; and that it was, in fact, possible to reproduce the original pages by a simple process of numerical subdivision, if only the MS had preserved the lines of the original writing. Further study of the Vatican Codex showed that a large number of the books of the New Testament were capable of this subdivision (by the very simple process of dividing the column of the MS into three equal parts), and that the pages resulting from the subdivision were very closely related to the original pages.

Perhaps this will become easier to apprehend by a simple variation of the statement. Imagine a printed book, in which there are, let us say, ten equal pages, of thirty lines to each page, printed uniformly. If a reprint be made of this book in any other form, *i. e.* on pages and with lines of a different size to the copy, it is evident that the original arrangement of the book will be lost, and it is very unlikely that the last page of the new book will be a complete one. If, however, the printer adheres to the original lines, no matter how he may change his pages or his type, we shall always be able to restore the book to its original shape by simple

subdivision of its 300 lines into ten pages, although, of course, the subdivision may not be easy to detect, nor to demonstrate. This is what has happened in the Vatican MS; the scribe has retained the original line, and in a certain sense has preserved the original page also, since he made his column (as the investigation will show) by placing three of the original pages in a vertical line. This fundamental fact is the key to the method of textual criticism to which these pages form an introduction.

NEW TESTAMENT AUTOGRAPHS.

A. 1. In the course of the first lecture, which I had the honor of delivering in this University, on the Textual Criticism of the New Testament, I pointed out that the material of the second and third Epistles of St. John was probably a sheet or series of sheets of papyrus ; and not only so, but that in the two documents mentioned, the sheet of paper was of a given size, capable of holding a given quantity of uncials. The first of these statements was based upon the allusion which the writer makes to paper, pen, and ink (*διὰ χάρτου καὶ μέλανος*, II John. 12 ; *διὰ μέλανος καὶ καλάμου*, III John. 13) ; while the second statement was an inference from the equality in the contents of the two Epistles, which in Westcott and Hort's edition of the New Testament occupy twenty-nine lines of type apiece, and from the evidence that in each case the writer had completely filled the sheet on which he was writing, since he complains of the insufficiency of his writing materials (*πολλὰ ἔχων ὑμῖν γράφειν, πολλὰ εἰχον γράψατε σοι*). From this point we are led to the enquiry as to the usual size of the sheets of paper employed in the New Testament documents, and the number employed in the autographs of the several books.

2. In order to make the enquiry carefully, we will first tabulate the number of columns and lines occupied by the uncial letters of the separate texts, as they are presented in the oldest known manuscripts. We begin, then, with the Vatican Codex, B. This manuscript is written in columns, three to the page, and each column contains 42 lines of uncial writing. Omitting the Epistle to the Hebrews, the latter part of which is in a later cursive hand, and the Apocalypse which is also supplied in cursive character,¹ we construct the following table :

¹ Scrivener adds the Pastoral Epistles (Introduction, p. 96), apparently following Cardinal Mai, but I can find no trace of them in the Roman edition. The Palaeographical Society, in the description accompanying their facsimile, follow Scrivener.

TABLE I.

	Columns	Lines	Total Lines
Matthew	127	9	5343
Mark	77	31	3265
Luke	136	41	5753
John	97	6	4080
Acts	130	3	5463
Romans	49	16	2074
I Corinthians	46	6	1938
II Corinthians	31	28	1330
Galatians	15	27	657
Ephesians	16	22	694
Philippians	11	0	462
Colossians	11	15	477
I Thessalonians	10	28	448
II Thessalonians	5	34	244
James	12	26	530
I Peter	12	30	534
II Peter	8	32	368
I John	13	27	573
II John	1	27	69
III John	1	27	69
Jude	3	27	153

The first thing that strikes us on examining this table is that the compositions do not end, as one might suppose, at different points of the page according to random distribution, but they show a preference for ending at particular points, and especially at the 27th line. Out of the 21 documents cited, five end on the 27th line of the page, two on the 28th and one on the 26th. This is very remarkable.

3. If the compositions were of arbitrary length, the probability that five out of the twenty-one should end on the same particular line is small indeed. Unless I am mistaken, it would be represented by the fraction

$$\frac{21 \cdot 20 \cdot 19 \cdot 18 \cdot 17}{1 \cdot 2 \cdot 3 \cdot 4 \cdot 5} \cdot \left(\frac{1}{42}\right)^5 \cdot \left(\frac{41}{42}\right)^{16}$$

which is evidently much less than $\frac{1}{1 \cdot 2 \cdot 3 \cdot 4 \cdot 5} \cdot \frac{1}{32}$ or $\frac{1}{3840}$. We may be sure then that the odds are at least four thousand to one against such a conjunction of endings being the work of *chance*.

It is evident that the eight compositions alluded to, viz. II Corinthians, Galatians, I Thessalonians, James, the three Epistles of John, and Jude, are each written on an integral number of sheets of a given size; and further, this sheet of given size must bear a peculiar relation both to the whole column of the Vatican Codex consisting of 42 lines, and to the fractional column of 27 lines; for, otherwise, it would not be possible for documents of different length, even though written on sheets of given size, to end at the same place on the Vatican page. If we allow a line for the subscription of those Epistles which end at the 27th line, we have to seek a submultiple of 28 and 42; and we at once see that 14 lines of the Vatican Codex bears some multiple proportion to the size of a page of the original writing, and in all probability, in the cases referred to, we may say that 14 lines of the Vatican Codex represents exactly the page of the autograph, the only submultiples of 14 being 7 and 2. This provides us with a unit upon which to base our calculations, which for convenience we will denominate a V-page.

4. We see, then, that of the Epistles especially referred to,

II Corinthians	= 95 V-pages exactly.
Galatians	= 47 V-pages, wanting one line.
I Thessalonians	= 32 V-pages exactly.
James	= 38 V-pages, wanting two lines.
I John	= 41 V-pages, wanting one line.
II John	each = 5 V-pages, wanting one line.
III John	each = 5 V-pages, wanting one line.
Jude	= 11 V-pages, wanting one line.

With regard to these conclusions, the single line left blank in the letter is probably left for subscription; in the case of the Epistle to the Galatians we have the additional explanation that there was a sentence in it written in large letters by the Apostle Paul's own hand, and when this sentence is copied there is a slight contraction in the copy as compared with the original.

With regard to St. James, we find two lines wanting; either, therefore, his handwriting is larger than ordinary, or we may assume that he actually left a somewhat larger blank space than was usual with the other writers, who evidently economized every inch of paper. The sheet of paper, too, is noticeably a small one; it is only capable of containing 14 lines of average length, about 17 letters each: this also is explicable by the supposition of economy, for the cost of a sheet of papyrus increases with the size of a sheet, but

in a much greater ratio than the sheet, on account of the difficulty of finding plants or reeds of a very great length and section. We can see, then, that the cheapest paper is used, and no space spared.

Now turn to the table again, and observing that our manuscript-unit is fourteen lines of the Vatican Codex, we see that in the autograph

Philippians = 33 V-pages exactly.

We come, then, to a group of three Epistles which run slightly over an exact number of pages; thus:

Romans occupies 148 V-pages and two lines.

Colossians 33 V-pages and one line.

I Peter 38 V-pages and two lines.

With regard to the Epistle to the Romans, it is not inconceivable that in 148 pages the copy should have gained two lines on the autograph; the study of the Epistle is, however, complicated by the existence of important various readings, and by the doubtful character of its concluding portion, which seems rather to be addressed to an Ephesian than a Roman community, and by the questionable authenticity of its doxologies. We content ourselves, for the present, by saying that the Epistle, as it stands in Codex B, probably represents 148 pages of the autograph.

With regard to the Epistle to the Colossians the question is more simple, as the document is shorter. Four lines of this Epistle, at least, are from the hand of Paul himself, and would therefore be in larger characters than usual; this would make the original document longer than 33 V-pages and one line. Either, therefore, the greater part of a page was left blank, which is unlikely; or Codex B has inserted words in the text, or the amanuensis of Paul (Tychicus, Onesimus?) must have written a smaller hand than was normal.

We leave the matter for the present undecided.

Similar remarks will apply to the 1st Epistle of Peter.

We annex the 2d Epistle of John, as we imagine it to have stood on the original sheets.

When we turn to the Gospels we have a much more difficult question to examine, on account of the multitude of various readings. We shall simply remark that the Gospel of Luke, in Codex B, is within a line of the end of a column, so that

Luke = 411 V-pages, wanting a single line.

In the Gospel of St. John, if we omit the last verse, we find ourselves at the end of a page, and

John = 291 V-pages exactly.

It will have been noticed that the number of V-pages occupied by the documents discussed is more often odd than even, which is more consistent with the hypothesis of papyrus sheets written on one side only, than with the supposition of a material capable of being written on both sides.¹

5. We shall now turn our attention to the Sinaitic Codex, which is written in columns, four to each page, and in lines, 48 to each column.² The difficulty in this case will arise from the fact that the lines of the text are not nearly so uniform as in the Codex Vaticanus, and in the first two Gospels in particular the text is broken up into paragraphs, and the recurrence of short lines, unless it be a genealogical feature of the successive MS, will prevent us from tracing the structure of the original documents. We proceed, however, to form our second table, constructed in the same way as the previous one, and containing a larger collection of books. The lines in this manuscript are shorter than in B, by several letters.

¹ The more delicate papyri are quite unsuited to the reception of writing on both sides: that species, in particular, which was held in the highest Roman estimation, and honored with the name of Augustus, was so fine as to be almost transparent, so that its extreme tenuity came to be regarded as a defect.

For a document to be written on both sides seems to be a mark of the poverty of the writer or the over-productiveness of his brain: thus we find in Juvenal I 5:

“Summa pleni jam margine libri
Scriptus et in tergo, neclum finitus Orestes.”

Lucian, Vit. Auct. 9, represents Diogenes as saying η πήρα δέ σοι θέρμων ἔστω μεστή καὶ ὀπισθογράφων βιβλίων.

Scripture students will call to mind an illustration of a similar kind in the Apocalypse, where the plenitude of coming judgments and tribulations is represented by a book or paper-roll written both outside and inside (Rev. V 1).³

² This is not always true; in the Catholic epistles the scribe has frequently contented himself with a column of 47 lines. I do not know whether this peculiarity has ever been noted. Scrivener, in his collation of the Sinaitic MS, does not seem to allude to it. Our results, as given in the table, must be corrected for the aberration of the scribe, when we come to analyse the documents more closely.

TABLE II.

	Columns	Lines	Total Lines
Matthew	139	1	6672
Three letters only in the residual line.			
Mark	85	4	4084
Luke	149	24	7176
John	107	35	5171
Acts	146	10	7018
Romans	53	6	2550
I Corinthians	51	12	2460
II Corinthians	35	6	1686
Galatians	16	45	813
Ephesians	18	5	869
Philippians	12	9	585
Colossians	12	13	589
I Thessalonians	11	21	549
II Thessalonians	6	3	291
Hebrews	40	24	1944
I Timothy	13	40	664
II Timothy	10	3	483
Titus	5	37	277
Philemon	2	24	120
James	13	33	657
I Peter	14	9	681
II Peter	9	24	456
I John	15	12	732
II John	1	39	87
III John	1	39	87
Jude	4	6	198
Revelation	68	12	3276
Barnabas	53	18	2562

The first thing we notice is that the distribution of the concluding lines of the books is much more varied and irregular. The only thing that is remarkable is the recurrence of the multiples of twelve; three books end at the twelfth line, viz. I Corinthians, I John, Revelation; four end on the 24th line: Luke, Hebrews, Philemon, and II Peter; the Gospel of John ends on the 35th line, which may practically be counted as the 36th.¹ This, again, can hardly be

¹ It may be asked why, in discussing this table, we pay no attention to the repetition of the sixth line as an ending of three books, nor to the double recurrence of the number three. I have no theoretical objection to urge

accidental; we may assume that in the cases alluded to, with the exception of the 1st Epistle of John, which, on account of the irregular length of the columns, furnishes an accidental coincidence, there is a unit sheet of paper employed, capable of containing 12 lines of the Sinaitic Codex; we shall therefore have a new leaf of paper, (for reference to which we adopt the expression S-page, in order to distinguish it from the previous V-page), by means of which to measure our documents.

With regard to the comparative sizes of the two pages, it is evident at a glance that the S-page is smaller than the V-page, for it contains twelve lines where the other has fourteen, and has a smaller number of letters to the line.

6. We thus get the key to the method by which the text of the papyrus leaves was reduced into the shape in which we find it in the oldest manuscripts. Codex B selects the larger type of page, and arranges them nine on a page, or three in a side; while the Sinaitic Codex selects the smaller leaf, and arranges them sixteen on a page,

against either of these numbers, seeing that they are both submultiples of the whole column of 48 lines; but practically they are too small subdivisions, and their recurrence is accidental. The probability that out of 28 books, one number should recur in the line-endings three times (I do not say this time a particular number) is represented by

$$48 \cdot \frac{28 \cdot 27 \cdot 26}{1 \cdot 2 \cdot 3} \cdot \left(\frac{1}{48}\right)^3 \cdot \left(\frac{47}{48}\right)^{25}$$

whose value is nearly $\frac{21}{25}$.

It is almost certain, then, that such an event as the recurrence alluded to will be found in our table. Those who are interested in observing these recurrences may study the following table from the Codex Sinaiticus:

Tobit	ends on line	3	Jonah	ends on line	45
Judith	"	23	Nahum	"	15
Macc. I	"	38	Habakkuk	"	21
Macc. IV	"	37	Zephaniah	"	16
Isaiah	"	14	Haggai	"	3
Joel	"	19	Zachariah	"	38
Obadiah	"	28	Malachi	"	20

Here every ending is formed by random distribution (unless we except the book of Judith and the Maccabees), for the works referred to are translations, and have therefore no pattern; yet there is a double recurrence of the 3, and of the 38 with its submultiple 19. These are, of course, purely accidental. The recurrence would have to be more frequent before we should notice it, or look for any concealed cause at work to produce such a result.

four in a side. And it is this arrangement which Eusebius¹ describes when he says that the accurate MSS, prepared by order of Constantine, were written *τρισσά καὶ τετρασσά*; *i. e.* as we should say, in a square whose side is three, or in a square whose side is four. The V-pages, then, are arranged *τρισσά*, and the S-pages *τετρασσά*.

7. Now, examining our second table, we see at once that the Sinaitic Codex gives

Gospel of Matthew	= 556	S-pages, and three letters.
Gospel of Luke	= 598	S-pages.
I Corinthians	= 205	S-pages exactly.
Hebrews	= 162	" "
Philemon	= 10	" "
II Peter	= 38	" "
Revelation	= 273	" "

We may perhaps conjecture that Titus should be added to the list, as containing 23 S-pages and one line; while the Epistle to the Colossians is again doubtful, comprising 49 leaves and one line. We have thus deduced the type of almost all the Epistles, some of them with great exactness; and we observe that they fall into two groups, with the exception of some four or five Epistles, which either are not written so as to fill the paper, or are written on paper of a different size to the two sorts we have been considering, or on a different pattern.

8. When we turn to the Gospels we have a harder problem to solve, but I think we may say that if the two principal types of the early MSS are those indicated as *τρισσά* and *τετρασσά*, then it is far more likely that those types were found in the Gospels than that they were merely adopted from the Epistles. We may therefore expect to find some of the Gospels written *τρισσά* and some *τετρασσά*, or rather some on the V-page and some on the S-page. The question is, how shall we determine the type of the autograph for any particular Gospel? And here an important remark must be made. I am aware that every one of these results and suggestions is subject to a disturbing factor of the greatest moment, *viz.* the question of various readings in the text, and of accidental omissions or insertions of passages or lines in the great Codices. The disturbance will be most to be apprehended in the case of the longer compositions, and with regard to these all our results must be looked upon at first as

¹ Eusebius, Vit. Const. IV 37.

tentative. But in the smaller writings the various readings are generally so few and unimportant that the majority of our results may be regarded as unaffected by them. We will, however, examine the effect of these various readings in each of the separate books. It is the more important to do this carefully, because the Sinaitic and Vatican Codices are known to contain a number of apparent insertions and omissions and repetitions, which have been held up by a certain school as convincing proof of their unreliable character as witnesses to the text of the New Testament.

Dr. Dobbin gave in the Dublin University Magazine for November, 1859, a calculation of the omissions of Codex B in the different books of the New Testament, in which we find for

Matthew 330 omissions.	Jude 11 omissions.
Mark 365 "	Romans 106 "
Luke 439 "	I Cor. 146 "
John 357 "	II Cor. 74 "
Acts 384 "	Gal. 37 "
James 41 "	Eph. 53 "
I Peter 46 "	Philip. 21 "
II Peter 20 "	Coloss. 36 "
I John 16 "	I Thess. 21 "
II John 3 "	II Thess. 10 "
III John 2 "	

An appalling table, certainly, and one which, if we did not remember that the figures are the result of a collation with the Textus Receptus, and that the majority of them refer to wholly insignificant readings, would almost make us despair of finding in the Vatican or Sinaitic MSS any traces of the original style and size of the books of the New Testament. We will, however, discuss any important readings that may occur, and after having first carefully dissected the text of St. John, and examined the bearing of our investigation upon the stichometry of the New Testament, we will proceed to the Epistles, beginning with the smaller ones, and so working up to the longer Epistles, the Acts and the Gospels. And no result of the previous tentative examination is to be allowed to pass unchallenged or unverified.

9. We begin with the Gospel according to John. In the Vatican Codex this occupies 97 columns and six lines. In the Sinaitic Codex it occupies 107 columns and 35 lines. At first sight, therefore, it seems that the Gospel is written on the S-page, with only a

deficiency of one line from a total of 431 S-pages. But here comes in the question of the last verse of the Gospel, which Tischendorf observed to be written in the Sinaitic MSS by a different hand, and many scholia to different MSS affirm to be an addition. Removing this verse, eight lines of the Codex, the S-page is of course no longer apparent. But strange to say, when the verse is also removed from Codex B, in which it occupies six lines at the top of a page, we are left with a Gospel terminating at the end of a page, and in our notation occupying exactly 291 V-pages. The Gospel of John is, therefore, probably written on the V-page, and the apparent contradiction of this statement by the Sinaitic Codex may be due to the fact that in the type of MSS which that Codex has been following some one has utilized part of the blank space at the latter half of a column for the insertion of a sentence as to the number of books that might have been written. The addition must have been earlier than the age of vellum MSS, and may have arisen in the transcription of the Gospel of John from the larger-sized paper to the smaller, since it nearly fills the blank in a smaller sheet, and that sheet not the lowest in a Sinaitic column.

10. This conclusion with regard to the autograph of St. John leads to very important consequences with regard to the celebrated pericope of the woman taken in adultery. An examination of this passage shows that there are 908 letters either inserted in the text or dropped from it. Now the average number of letters to the line in St. John's Gospel in the Codex Vaticanus is 16.4, from whence we conclude that the passage in question is equivalent to about 56 lines of Codex B, *i. e.* to four V-pages exactly. Now it is obvious that four such pages could not by any possibility have been excised from a document in which the V-pages are arranged nine in a square. They must, therefore, have been lost from the original document before it came into the shape represented by Codex B. Their reinsertion has been characterized by great awkwardness in later manuscripts, and breaks the continuity of the narrative. They have been, in fact, restored to a place which they did not previously occupy.

Before going further we insert a reproduction of the four pages which we have reason to believe the lost passage to have occupied.

As a restoration of the text of B, it is not quite a successful effort. I have not, I find, done justice to the syllabic division followed by the scribe, who has a distinct custom in ending his lines and dividing his words, and prefers, if possible, to write a seven-syllabled line.

ΠΕΡΙ
ΜΟΙΧΑΛΙΔΟΣ
ΠΤΕΡΙΚΟΠΗ

ΚΑΙ ΕΠΟΡΕΥΘΗ ΣΑΝ ΕΚΑ
ΣΤΟ ΣΕΙΣΤΟΝ ΟΙΚΟΝ ΑΥΤ
ΟΥ ΚΔΕ ΕΠΟΡΕΥΘΗ ΕΙΣΤΟ
ΟΡΟΣ ΤΩΝ ΝΕΛΑΙΩΝ ΟΡΘ
ΡΟΥ ΔΕ ΠΑΛΙΝ ΠΑΡΕΓ
ΕΝ ΕΤΟΙΣ ΣΤΟΙΕΡΟΝ ΚΑ
Ι ΤΑ ΣΟΛΑΟΣ ΗΡΥΞ ΤΟ Π
ΡΟΣΑΥΤΟΝ ΚΑΙ ΚΑΘΙΣΑ
ΣΕ ΔΙΔΑΣΚΕΝ ΑΥΤΟΥ
ΣΑ ΓΟΥΣΙΝ ΔΕΟΙ ΓΡΑΜ
ΜΑ ΤΕΙΣΚΑΙΟΙ ΦΑΡΙΣ
ΛΙΟΙ ΓΥΝΑΙΚΑ ΕΠΙΜΟΙ
ΧΕΙΑΚΑ ΤΕΙΛΗ ΜΜΕΝΗ
Ν ΚΑΙ ΣΤΗ ΣΑΝΤΕΣ ΑΥΤΗ

ΚΑΙ ΕΠΟΡΕΥΘΗ ΣΑΝ ΕΚΑ
ΣΤΟ ΣΕΙΣΤΟΝΟΙΚΟΝ ΑΥΤ
ΟΥ ΤΑΣ ΔΕ ΕΠΟΡΕΥΘΗ ΕΙΣΤΟ
ΟΡΟΣ ΤΩΝ ΕΛΑΙΩΝΩΝ Ρ
ΡΟΥΔΕ ΤΑΛΙΝ ΤΑΡΕΓ
ΕΝ ΕΤΟΙ ΕΙΣΤΟΙ ΕΡΩΝ ΚΑ
Ι ΤΑ ΣΟΛΑ ΛΟΣ ΗΡΧΕΤ ΟΤ
ΡΟΣ ΑΥΤΟΝ ΚΑΙ ΚΑΘΙΣΑ
ΣΕ ΔΙΔΑΣΚΕΝ ΑΥΤΟΥ
ΣΑ ΓΟΥΣΙΝ ΔΕΟΙ ΓΡΑΜ
ΜΑ ΤΕΙΣ ΚΑΙ ΙΟΙ ΦΑΡΙΣ
ΔΙΟΙ ΓΥΝΑΙΚΕΣ ΤΙΜΟΙ
ΧΕΙΑ ΚΑΤΕΙΛΗΜΜΕΝΗ
Ν ΚΑΙ ΣΤΗ ΣΑΝΤΕΣ ΑΥΤΗ

ΝΕΝ ΜΕΣ ΩΛΕ ΓΟΥΣΙΝΑ
Υ ΤΩ ΔΙΔΑΣΚΑΛΕ ΑΥΤΗ
Η ΓΥΝΗ ΚΑΤΕΙΛΗΠΤ
ΑΙ ΕΠΑΥΤΟ ΦΩΡΩΜΟΙ
ΕΥ ΟΜΕΝ Η ΕΝ ΔΕΤ ΩΝΟ
ΜΩΗ ΜΙΝ ΜΩΥ ΣΗ ΣΕ ΝΕ
ΤΕΙ ΛΑΤΟ ΤΑΣ ΤΟΙ ΑΥΤ
Α ΣΛΙ ΘΑ ΖΕΙΝ ΣΥ ΟΥ
ΝΤΙ ΛΕ ΓΕΙΣ ΤΟΥ ΤΩ Δ
Ε ΕΛΕ ΓΟΝ ΠΕΙΡΑΖ ΟΝ
ΤΕ ΣΑΥΤΟΝ ΙΝΑ ΕΧΩ Σ
ΙΝ ΚΑΤΗ ΓΟΡΕΙΝ ΑΥΤ
ΟΥ ΔΕ ΕΙΣ ΚΑΤΩ ΚΥΨΑ
ΣΤΩ ΔΑΚΤΥΛΩ ΚΑΤΕΓ

ΡΑΦΕΝΕΙΣΤΗΝΓΗΝΩ
ΣΔΕΕΠΕΜΕΝΟΝΕΡΩ
ΤΩΝΤΕΣΑΥΤΟΝΑΝΕΚ
ΥΨΕΝΚΑΙΕΙΤΤΕΝΑΥΤΟ
ΙΣΟΔΑΝΑΜΑΡΤΗΤΟΣΥ
ΜΩΝΠΡΩΤΟΣΛΙΘΟΝΕ
ΠΑΥΤΗΝΒαλετωκα
ΙΠΑΛΙΝΚΑΤΩΚΥΨΑС
ΕΓΡΑΦΕΝΕΙΣΤΗΝΓΗ
ΝΟΙΔΕΑΚΟΥСАНΤΕС
ΕΣΗΡΧΟΝΤΟΣΙСКА
ΘΕΙСАРЗАМЕНОИАП
ΟΤΩΝΠΡΕСВΥΤΕΡΩΝ
εωστωνεсҳατωνκа

ΙΚΑΤΕΛΕΙΦΘΗΜΟΝΟСΟ
ΙСКАΙΗΓΥΝΗΕΝМЕСΩ
ΟУСАДАНАКУΨАСДЕО
ΙСКАДИМНДЕНАΘЕАС
АМЕНОСТЛННТНСГ
ҮНАИКОСЕИТТЕНАУ
ТНГҮНАИТТОҮЕИСИН
ЕКЕИНОИОИКАТНГОРО
ΙСОҮОҮДЕИССЕКАДЕ
КРИНЕННДЕЕИТТЕНОҮД
ЕИСКҮРІЕЕИТТЕНДЕОІС
ОУДЕЕГВСЕКАТАКР
ИНАПОРЕҮОҮКАИМН
КЕТІАМАРТАНЕ

Moreover, some of the most capriciously concluded lines are meant to be syllabically divided, such as those which end with *ov* and leave the *κ* of the *οὐκ* to be carried to the next line. This division occurs so frequently that it is evident that the scribe, in writing such words as *οὐκ ἔστιν*, really regards the *κ* as a sort of prefix to the verb.

We may now proceed to determine the place where the celebrated pericope should be reinserted. Turning to the end of the fifth chapter, we find that it closes with the words: "There is one that accuseth you, even Moses on whom ye trust. For if ye had believed Moses, ye would have believed me; but if ye do not believe his writings, how can ye believe my words?" The scene then changes abruptly to Galilee: "After these things Jesus departed to the other side of the sea of Galilee from Tiberias." It is between these chapters that I would locate the pericope. The fifth chapter narrates how Jesus found in the temple the man whom he had healed at the pool of Bethesda; it describes the long subsequent discussion with the Pharisees, which must have taken nearly all day, after which they depart, each man to his own house, but Jesus to the Mount of Olives. Appropriately the Pharisees bring him next morning the woman for judgment, with the remark that "Moses in the law said . . . but what sayest thou?" Codex D, which gives the pericope in somewhat shorter form, is even more forcible, *τι δὲ νῦν λέγεις*; we conclude, then, that this is a far more likely place to locate the pericope than at the end of the seventh chapter.

This readjustment of the text at once removes many of the objections urged against its authenticity, and it also helps to fill up that unsightly chasm at the close of the fifth chapter. It is unnecessary to discuss in detail the objections which had been raised by critics to the passage as it originally stood, but we will quote a single one out of many difficulties urged, as given by Davidson in his Introduction to the New Testament, I 363. He says: "The greatest perplexity connected with the passage lies in the reason for bringing the case before Jesus. No adequate motive appears to induce the Scribes and Pharisees to employ this woman for the purpose of embarrassing the Redeemer, and thence extracting a ground of accusation against him. It is evident that they wished to entrap him; the narrative itself states that they tempted him in order to procure a tangible charge, but how they expected to do so by means of the adulteress is exceedingly obscure." I hope the obscurity disappears in the new arrangement of the text, and

that the passage is more harmoniously placed with regard to the context than previously.

Moreover there is this difficulty, that in the ordinary supposition these lost V-pages would begin four lines from the top of the page, and we should have to assume that Codex B had either added four lines to the autograph, or lost ten lines in the first seven chapters, before we could rectify the pages so as to reintroduce the lost columns of the papyrus. Neither of these suppositions seems likely, as the text of John in these chapters is remarkably good, and the text of B is more likely to be marked by omissions than insertions.

On our hypothesis they begin on the last line of the left-hand column of the page, and we have only to assume that a single line has been lost from Codex B in the first five chapters. We proceed to go in search of this lost line. The Gospel of John in B has comparatively few various readings in the shape of insertions or omissions. The majority of them consist of transpositions and changes of merely verbal importance. We proceed to tabulate those of them which affect our enquiry, from the principal editors and MSS.

	Letters	Text.	Rec.	N	B.	W. H.	T.	Tr.
I 5. <i>τῶν ἀνθρώπων</i>	II	+	+	—	+	+	+	+
I 13. <i>οὐδὲ ἐκ θελήματος ἀνδρὸς</i>	21	+	+	—	+	+	+	+
I 27. <i>ὅς ἐμπροσθεν . . .</i>	21	+	—	—	—	—	—	—
II 2. A long variant in the Sinaitic, but very doubtful.								
III 13. <i>ό δῶν ἐν τῷ οὐρανῷ</i>	13	+	+	—	—	+	+	+
III 31. <i>ἐπάνω πάντων ἐστίν</i>	16	+	—	+	+	—	+	+
IV 9. <i>οὐ γάρ συνχρώνται . . .</i>	34	+	—	+	+	+	+	+
IV 14. <i>οὐ μή διψήσῃ . . .</i>	40	+	+	+	+	+	+	+
V 12. <i>τὸν κράβαττόν σου</i>	15	+	+	—	—	—	[+]	
V 16. <i>καὶ ἐγέντοντο . . .</i>	25	+	—	—	—	—	—	—
V 45. <i>πρὸς τὸν πατέρα</i> repeated 13	—	—	+	—	—	—	—	—

Reviewing the variants of the text of B thus far, we find four cases of probable omission, and two of insertion. If we allow that B is right in omitting *τὸν κράβαττόν σου*, the result is a balance of a line to be added, which suits our case exactly.

11. We must now examine the remainder of the Gospel in the same manner.

VI 11. <i>τοῖς μαθηταῖς . . .</i>	23	+	—	—	—	—	—	—
VI 22. <i>ἐκεῖνο εἰς ὁ . . .</i>	27	+	+	—	—	—	—	—
VII 30. <i>ἄγιον δεδομένον</i>	14	+	—	—	—	—	[+]	
VII 46. <i>ὡς οὐτος ὁ ἀνθρώπος</i>	16	+	+	—	—	—	[+]	

VIII 52. B reads incorrectly, but the passage is of the same length as the ordinary reading. .

VIII 59. διελθὼν . . .	34	+	—	—	—	—
IX 7. B has dropped a line by δμοιοτέλευτον.						
IX 36. ἀπεκρίθη . . .	23	+	+	—	[+]	+
X 13. τὰ πρόβατα . . .	26	+	—	—	—	—
X 26. καθὼς εἰπον ὑμῖν	14	+	—	—	—	—
XI 40. οὐ δὲ τεθνηκὼς	21	+	—	—	—	—
XIII 10. εἰ μὴ τοὺς πόδας	13	+	—	+	[+]	—
XIII 14. B repeats two lines and a half.						
XIII 24. B has a slightly longer reading.						
XIII 32. εἰ ὁ θεὸς . . .	21	+	—	—	—	[+]
XIV 4. καὶ οἴδατε	9	+	—	—	—	—
XIV 5. δυνάμεθα	8	+	+	—	—	—
XVI 16. ὅτι ὑπάγω . . .	21	+	—	—	—	—
XVII 15. (κ)όσμου ἀλλὰ . . . omitted	35	+	+	—	+	+
XVII 18. κάγω ἀπέστειλα repeated	31	—	—	+	—	—

The total result of our examination of this passage is that perhaps one or two lines might be added to the text of B, but the text has repeated more than five lines and dropped only three, so the total result is hardly affected.

It will be seen that we have made no allusion to the account of the troubling of the waters at Bethesda, which does not occupy a distinct number of V-pages.

But we must not altogether pass the passage by, for it enables us to see why the pericope *de adultera* came to be inserted in the wrong place. There is no doubt whatever that the gloss in question is very early, seeing that we find a striking reference to it in Tertullian, *De Baptism.* 9. Written on the V-pattern, the passage John V 3, 4 would occupy about 10 lines of manuscript. Bearing in mind that the passage to which the pericope *de adultera* has been wrongly restored is four lines from the beginning of a column, and adding the gloss on the Troubling of the Water to the fifth chapter, we have now moved the inserted pericope to the beginning of a V-page. Each of the three errors, viz. the omission of the pericope, its reinsertion, and the insertion of the gloss in chapter V, is therefore anterior to the age of vellum manuscripts, and we can even arrange the errors in their proper chronological order. Perhaps we ought to have added that in the same interval of time a balance of a single line was lost from the first five chapters of B.

The majority of the errors are of the V-type, that is, there are more V-lines than S-lines inserted or omitted. And this is just what we should expect, if the MSS were originally of the V-pattern; and we may lay down the following general principle: *A manuscript originally written on a certain pattern will generally show a majority of errors of the pattern on which it is written.* The advantage of this proposition is that it will help us to determine the original character of a MS, whether the MS occupy an exact number of pages of its pattern or not. We are now in the position to print the Gospel of John, approximately, from the original sheets.

No one can study the Gospel carefully without noticing the discontinuity of many of its sequences. The probability is that some passages are still lost from the 500 original sheets of the Gospel.

12. Now let us turn to the close of the Gospel and examine the endings of the 20th and 21st chapters: the similarity of the 30th verse of the 20th chapter to the last verse of the 21st chapter is unmistakable. The Gospel has apparently two endings. And here comes in the remarkable fact that Tertullian calls the 30th verse of the 20th chapter the close of the Gospel, although he quotes from the 21st chapter in at least two places: "Ipsa quoque clausula Evangelii propter quid consignat haec scripta, nisi, ut credatis, inquit Iesum Christum filium Dei?"¹ The proper place for the two closing verses of the 20th chapter is most likely at the end of the 21st chapter.

For the expression that there were "many other signs not recorded which Jesus wrought" implies (just as the expression "I had many things to write to you" in the II and III of John) an insufficiency of writing material; we are close to the end of the roll of paper.

In the next place, the restoration of the closing verses of the 20th chapter to the end of the 21st is strikingly harmonious with the introduction of the Gospel, to which it returns as a keynote, and with the 24th verse of the 21st chapter which precedes it.

And thirdly there is room for a single conjectural emendation which adds vividness to the narrative. In XXI 30, after *ἐνώπιον τῶν μαθητῶν*, many important MSS, especially those which exhibit a Western text, insert *αὐτοῦ*. It is a lawful suggestion that the original reading was simply *ἐνώπιον αὐτοῦ*, which was altered as soon as the verse had become severed from its proper connection.

¹ Tertullian, Adv. Praxeam, 25.

The Gospel now closes as follows:

οὗτός ἐστιν ὁ μαθητὴς ὁ μαρτυρῶν περὶ τούτων
καὶ ὁ γράφας ταῦτα, καὶ οἴδαμεν ὅτι ἀληθῆς
αὐτοῦ ἡ μαρτυρία ἐστίν· πολλὰ μὲν οὖν καὶ ἄλλα
σημεῖα ἐποίησεν ὁ Ἰησοῦς ἐνώπιον αὐτοῦ ἀ οὐκ
ἐστιν γεγραμμένα ἐν τῷ βιβλίῳ τούτῳ· ταῦτα δὲ
γέγραπται ἵνα πιστεύητε ὅτι Ἰησοῦς ἐστιν ὁ Χριστὸς
ὁ υἱὸς τοῦ Θεοῦ καὶ ἵνα πιστεύοντες ζωὴν
ἔχητε ἐν τῷ δινόματι αὐτοῦ.

13. We now proceed to state the further results at which we have arrived for the several books of the New Testament, postponing the critical details to a subsequent page. It will be convenient to tabulate, as far as possible, the whole of the results in a form suitable to a critical comparison.

TABLE III.

	SINAITIC.			VATICAN.			S or V.	Probable number of S-pages.	Probable number of V-pages.	Probable number of sheets bought.	Ratio of V-line to S-line, uncorrected for omissions, etc.	Average Letters to the line.	
	Col.	Line	Total	Col.	Line	Total						S	V
Matthew	139	1	6672	127	9	5343						1.249	13.24 16.8
Mark	85	4	4084	77	31	3265						1.250	13.04 16.4
Luke	149	24	7176	136	41	5753	S	600		600		1.247	13.6 16.5
John	107	35	5171	97	6	4080	V		295	300		1.267	13.3 16.7
Acts	146	10	7018	130	3	5463	S	578		600		1.284	
I Thess.	11	21	549	10	28	448	SV	46	32	50		1.225	
II Thess.	6	3	291	3	34	244	S	24				1.192	
I Corinthians	51	12	2460	46	6	1938	S	205				1.269	
II Corinthians	35	6	1686	31	28	1330	V		95	100		1.267	
Galatians	16	45	813	15	27	657	V		47	50		1.236	
Romans	53	6	2550	49	16	2074	V		147	150		1.229	
Ephesians	18	5	869	16	22	694	S	73				1.252	
Philippians	12	9	585	11	0	462	SV	49	33	50		1.266	
Colossians	13	13	589	11	15	477	S	49		50		1.232	
Philemon	2	24	120				S	10					
I Tim.	13	40	664										
II Tim.	10	3	483										
Titus	5	37	277										
Hebrews	40	24	1944										
James	13	33	657	12	26	530	V		38	40	1.237		17.2
I Peter	14	9	681	12	30	534	S	57		60	1.275		
II Peter	9	24	456	8	32	368	S	38		40	1.239		
I John	15	12	732	13	27	573	V		41		1.277		16.4
II John	1	39	87	1	27	69	V		5		1.260		16.5
III John	1	39	87	1	27	69	V		5		1.260		15.2
Jude	4	6	198	3	27	153	V		11		1.294		
Revelation	68	12	3276				S?	273					

We have, on the basis of the previous investigation, constructed a column in the table showing the ratio of the V-line to the S-line for different books.

If a book contain m lines in the Sinaitic and n in the Vatican Codex, we have, other things being equal, $mS = nV$, or

$$\frac{V}{S} = \frac{m}{n}$$

where V and S represent the V- and S-line respectively. But this ratio must be corrected for omissions and insertions ; if, for example, B omits q lines of the original, the ratio ought to be $\frac{m}{n+q}$, or it is diminished in the ratio $n:n+q$, or giving ρ either sign, and reserving the $+$ sign for omissions, the ratio is altered by the fraction $\frac{n}{n \pm q}$. Similarly, if the Sinaitic Codex omits ρ lines, the ratio is altered by $\frac{m \pm \rho}{m}$. Change in the style of a writer will also affect the number of lines, etc., but at any rate we can see that, as a general rule, *books written in the same style and by the same author will be similarly affected by the processes of transcription.*

Referring to our table we have ratios as follows :

John 1.267	I John 1.277
II John 1.260	III John 1.260

results so nearly coincident that they suggest the same hand in the original documents.

But this remark must not be unduly pressed ; for, strictly speaking, if any book is written out on the same two given patterns, the ratio of the lines is fixed, for V and S are fixed, and $\frac{m}{n} = \frac{V}{S}$.

Hence, when the text has been corrected, the column of ratios ought to be the same for all books. And the normal value of the ratio, if we allow 36 letters to the V-type for 28 to the S-type, is $\frac{9}{7}$, or 1.285. The first use of this table is to show, or rather suggest, omissions or insertions in a codex. When these are corrected for, there remains a residual effect upon the ratio produced by the variation in the hand of a scribe, induced by his copy being somewhat different from his normal style. And this residual effect may perhaps help us to classify the scribes of the different books.

We have grouped the Pauline Epistles in chronological order, and it is interesting to observe that those Epistles written at the

same time show traces of being written in the same manner. Thus Galatians and Romans are both written on the V-page; between them they occupy 200 sheets of paper.

Ephesians, Philippians, Colossians, and Philemon are all written on the S-page (unless we must except Philippians). And the four Epistles together occupy 200 sheets of paper. The three pastoral Epistles show traces of being written in the same style, but we have not been able to identify it. The two Epistles of Peter agree in this, that they are both written on the S-page.

B. 1. The resolution of the books of the New Testament into two main groups, characterized as the S-type and V-type respectively, has an important bearing upon the stichometry of the New Testament.

Professor Gildersleeve has drawn my attention to the analysis by which M. Ch. Graux showed in the *Revue de Philologie* for April, 1878, that the *οτίχος*, both in sacred and profane writers, represented not a verse, nor a clause, nor sentence, but a *fixed quantity of writing*. Evidence is offered in this article that copyists were paid at a fixed legal rate per 100 lines. Such a law would have been vain and illusory if early and constant tradition had not established what was to be understood by the length of the line. M. Graux estimates as nearly as possible the number of letters contained in a given work of some sacred or profane author, and divides this number by the number of *οτίχοι* which the manuscript of the work declares it to contain. The results at which he arrives are very remarkable, being almost all of them included between 35 and 38 letters to the *οτίχος*. From 50 consecutive lines in the Iliad opened at random, he deduces that the average Homeric line contains 37.7 letters.

The significance of these results can hardly be mistaken: they imply that the *οτίχος* is equivalent to the Homeric line. Now if we apply this result of M. Graux to the case of the Codex Vaticanus, it is almost impossible to resist the conclusion that two lines of the Codex Vaticanus are meant to represent the same quantity; we have found by selecting 25 lines at random in Codex B that the average for a single line is nearly 17 letters; two such lines come very near to the average obtained by M. Graux. But if this be correct, what shall we say of the much shorter lines of the Sinaitic Codex? We are inclined to believe that they represent the half of an iambic line. Taking the average of 25 lines from

the Medea of Euripides, we have 29.96 letters; but we have already found for the Codex Sinaiticus the number of letters to be nearly 14, which is not far from the half of the iambic line. These must therefore be two of the principal types of writing employed both before and after the time of the composition of the books of the New Testament: and these are the two principal types employed in the New Testament. The origin of what we have called the S-page and V-page respectively is therefore to be found in the iambic and hexameter lines.

These results admit of a very simple test. In the Epistle of James, I 17, we have an almost perfect hexameter:

πᾶσα δόσις ἀγαθὴ καὶ πᾶν δώρημα τέλειον.

Now this occupies exactly two lines in Codex B, as the following transcript will show:

ΠΑΣΑΔΟ
ΣΙΣΑΓΑΘΗΚΑΙΠΑΝΔΩ
ΡΗΜΑΤΕΔΕΙΟΝΑΝΩΘΕΝ

In the same way the iambic which St. Paul quotes in I Cor. XV 34 from Menander:

φθείρουσιν ηθη χρηστὰ ὄμιλίαι κακά,

is exactly two lines in the Sinaitic Codex.

It will be noticed that our lines, as a general rule, fall a little short of the average hexameter and iambic. The reason for this lies in the fact that a scribe paid at so much a hundred lines, when copying some other work than Homer, selected a short line of Homer for his pattern. By this means the conventional *στίχος* is a little smaller. These *στίχοι* must not be confounded with the divisions of the text made by Euthalius, an Alexandrian deacon, in the fifth century, which does not proceed by letters, but apparently by words and sentences.

2. The allusion which we have made to the existence of an iambic *στίχος* explains a difficulty in Josephus. At the close of the Jewish Antiquities the writer says, 'Ἐπὶ τούτοις τε καταπάνσω τὴν ἀρχαιολογίαν, βιβλοῖς μὲν ἔκοσι περιειλημμένην, ἐξ δὲ μυριάσι στίχων. M. Graux remarks on this that if we were to take the assertion of Josephus literally, that his work contained 60,000 *στίχοι*, we should find for the value of the *στίχος* the inadmissible quantity 28 or 29 letters. He therefore proceeds to explain away the statement of Josephus, as being a rough expansion of the assertion that each of the twenty books of the Antiquities contained 2000 to 3000 *στίχοι*.

Birt, on the other hand (Buchwesen, p. 204), attempts to evade the difficulty by changing $\epsilon\xi\delta\epsilon\mu\nu\rho\iota\alpha\sigma\iota$ into $\epsilon\delta\epsilon\mu\nu\rho\iota\alpha\sigma\iota$, by means of which he deduces the Josephus-line to be 34.2 letters.

We have only to assume, however, that Josephus employs the iambic verse as his model, and the result arrived at by M. Graux needs no further explanation.

A singular corroboration of this assumption will be found by examining the lengths of some of Josephus' own letters as given by himself. I will here only briefly allude to one result out of many. If we examine the six letters contained in the life of Josephus, we shall find that the

Letter of Jonathan to Josephus (Vita 44) contains 26 S-lines.

"	Josephus to Jonathan (Vita 44)	"	33	"
"	Jonathan to Josephus (Vita 45)	"	12	"
"	Josephus to Jonathan (Vita 45)	"	12	"
"	Agrippa to Josephus (Vita 65)	"	12	"
"	Agrippa to Josephus (Vita 65)	"	12	"

The recurrence of the number 12 is very remarkable, and four out of the six letters reduce at once to the S-pattern, while one of the remaining letters is only two lines in excess.

A similar remark will possibly apply to one or two other results of M. Graux. In calculating the value of the *στιχος* for the Epistles of Clement, as given in Gebhardt's *editio minor*, by means of the data supplied by Nicephorus and Anastasius, he comes to the conclusion that the *στιχος* is 29 letters to which he affixes the mark of doubtfulness. We need only assume that the writing is based on the iambic *στιχος* and all is clear. M. Graux appears to accept as the mean result for the *στιχος* based on the Homeric line, a number of letters between 34 and 38 as limits, and with 36 for the normal type. If we allow the same latitude of limits, say take the normal iambic *στιχος* at 28 or 29 letters and allow limits 27 to 31 letters, we can at once explain several other results which were rather rejected by M. Graux as inconsistent with his theory, or were marked by him with a query.

3. But now let us return for a moment to M. Graux's estimate of 36 letters to the *στιχος*. The following passage from Eustathius, Bishop of Antioch in the fourth century, will perhaps be a good test as far as the New Testament is concerned. In his treatise *De Engastrimutho*¹ we read as follows: *ἡπαν οὖν λίθοις ἵνα βάλωσιν ἐπ'*

¹ Migne, Patrol. XVIII 657.

αὐτὸν· ὡς δὲ ταῦτα προσγραψεν ἐν τῷ μεταξὺ πέντε πον καὶ τριάκοντα πρὸς τοῦς ἑκατὸν στίχους ὑπερβὰς ἐπιφέρει προσθεῖς· ἐβάστασαν οὖν οἱ Ἰουδαῖοι λίθους ἵνα λιθάσωσιν αὐτὸν, that is to say, between two given passages of the Gospel of John, VIII 59 and X 30, Eustathius reckons about 135 στίχοι. Now if we count these intervening lines in Codex B we have 326 lines, which is more than twice 135, and in the Sinaitic Codex the passage occupies 414 lines. If, however, we count the actual letters in the passage, we find from the Sinaitic Codex 5375 letters, which when divided by 135 gives us 39.9 letters to the στίχος, a result somewhat too large, but still confirmatory of M. Graux's conclusion. It will be noticed that Eustathius is approximate.¹ Probably he mistook 135 for 145. The number of intervening στίχοι is really nearer to 150, and at 36 letters to the στίχος is almost exactly 149. From this last result it will be easy to express any book in the New Testament in στίχοι, for we may say approximately :

$$\begin{aligned} 326 \text{ Vatican lines} &= 414 \text{ Sinaitic lines} \\ &= 149 \text{ στίχοι of 36 letters each.} \end{aligned}$$

The calculations are given in a subsequent table, and are compared with estimates derived from various codices.

4. The same supposition of a normal iambic στίχος explains the statement of Dionysius of Halicarnassus (on the superiority of the elocution of Demosthenes) that Demosthenes' works contain 50,000 or 60,000 στίχοι. M. Graux dismisses this statement with the words, 'on voit que Denys ne tenait pas à l'exactitude absolue des chiffres.' But even if we admit the estimate to be a rough one, we have a right to assume that the accurate number of στίχοι should fall *between* the assigned limits. That it does not so fall is pointed out by W. Christ in his Atticusausgabe des Demosthenes, in which he calculates from the stichometric indications of certain manuscripts of Demosthenes that the whole number of στίχοι is not much above 42,000. The conclusion drawn by the writer (as given by M. Weil in the Revue Critique for Nov. 27, 1882) is that the exemplar on which the reckoning is based is one of shorter lines than is usual.

But the question immediately arises whether this case is not explicable by the hypothesis of the iambic line: increasing the

¹ This supposition is unnecessary. Very interesting cases can be given, especially from Galen, of hexameter lines measured at over 40 letters.

estimated 42,000 *στίχοι* in the proportion of 7 to 9, which we have seen to be the ratio of the normal tragic verse to the heroic, we have 54,000 *στίχοι*, which falls nearly half-way between the limits suggested by Dionysius of Halicarnassus. We may study these stichometric indications in the important Munich MS of Demosthenes, known as Bavanicus, where the *στίχοι* are marked by hundreds on the margin by the letters A, B, etc. They are given by Reiske in his edition of Demosthenes, and we have only to take the average *στίχος* from the space intervening between two successive letters.

It is necessary to show that these stichometric marks do actually refer to a line measured by the longer model. As I have not been able to obtain a copy of M. Christ's work, I have calculated the *στίχος* from the data given by Reiske, where the marks are given at p. xcii of the preface, with the lines to which they refer. It would be difficult to mark the stichometric intervals even if the series were perfect (which is not the case by any means), for, first, we cannot tell to what part of Reiske's line the indication applies, neither can we be sure that Reiske knew to what part of the line of the MS they applied. Thus there is a chance of error four times repeated, twice for the beginning of the stichometric interval, and twice for its close.

As an example, let us take the oration against Timocrates. Reiske gives the following references to his pages and lines for the stichometric marks: 703, 17 A; 705, 17 B; 711, pen. Γ; 715, 10 Δ; 722, 14 Ζ; 725, 19 Η; 728, 22 Θ; 731, 26 Ι; 738, 18 Δ; 741, 26 Μ; 744, 1 Ν; 746, 18 Ζ; 752, 8 Ο; 755, 13 Π; 761, 22 Σ; 764, 25 Τ. Here the second Δ should be Α, and the second Ζ should be Σ. From these, by means of Reiske's 29-lined page, we at once get intervals 58, 185, 98, 207, 92, 90, 91, 193, 95, 62, 75, 184, 92, 183, 90 lines. Of these fifteen results, the first, fourth, tenth, and eleventh are clearly not a multiple of the stichometric interval, either because Reiske's text is not the text to which the marks can properly apply, or because the marks are wrongly placed. From the remaining results we get the value of the interval, the second being clearly the double of such an interval, and the mean of the results is 92.4 Reiske-lines. But the average Reiske-line is 40.2 letters; the stichometric interval is therefore 3714.48 letters, from which it at once appears that the marks are meant to represent the successive hundreds of hexameter lines, each line being 37 letters. This establishes the nature of the stichometry of Bavanicus.

5. It is from the edict of Diocletian, *de pretiis venalium*, that M. Graux derived the statement as to the pay of the scribe by the given amount of writing. We proceed to examine the edict more closely. It is given in many exemplars, more or less complete, in the *Corpus Inscriptionum Latinarum*, Vol. III, S. 800, the most important being an inscription from Stratonice. The following are the lines that affect our enquiry :

Membranario in [qua] t[r]endone pedali pergamena.	[xl denarii]
Scriptori in scriptura optima versus n° centum.	[xxv]
Se[quent]is scripturae versuum n° centum.	[xx]
Tabellanioni in scriptura libelli bel tabular[um] in versibus n° centum.	[x]

The prices are wanting in the inscription from Stratonice, but they are supplied from a Phrygian inscription marked 'H in the *Corpus*.¹

The first thing to observe is the existence of two distinct types of writing, denoted respectively *optima* and *sequens*. These are, as we should say, large and small size; a study of the whole inscription gives many instances of this. Take for example the price of apples in the edict :

Mala optima Mattiana sive Saligniani	n° decem	* quattuor.
Sequentia	n° viginti	* quattuor.
Mala minora	n° quadraginta	* quattuor.

This establishes the use of the words *optimus* and *sequens* as relating to the *res venales*. Next observe that the prices of the two styles of writing are in the ratio of 25 to 20 or 5:4. Now the ratio of the heroic verse to the iambic is, as we have shown, very nearly 36:28 or 9:7, which is a very close approximation to the previous ratio. *The two types of writing of the Diocletian edict are therefore our two standard verses.*²

¹ M. Graux gives the prices differently, quoting apparently from Waddington, and is followed by Birt (Buchwesen, p. 208). They write as follows :

Scriptori in scriptura optima versuum No. centum . . .	
Sequentis scripturae	XL
Tabellanioni, etc.	XXV

Birt also seems to assume that " *sequens* " refers to quality rather than quantity: " das Monument unterscheidet hier wie überall nur zwei Sorten und bezeichnet die schlechtere als *sequens*. "

² Dr. Bloomfield furnishes me with the following note :

In India, MSS are now copied and paid for by *çlokas* or *granthas*. The *çloka* is an iambic meter consisting of four times eight syllables, and any MS, whether

6. We observe that this table enables us to determine, to a close degree of approximation, the cost of the original transcription of the Codex Sinaiticus. Each page contains 96 iambic $\sigma\tau\chi\omega\tau$, or almost the legal hundred; the cost is therefore 20 denarii a page: allowing $345\frac{1}{2}$ leaves to the manuscript, the expense is $345\frac{1}{2} \times 40$ denarii, or 13,820 denarii. And the date of the edict of Diocletian is so little anterior to the production of the MS that we cannot be far wrong in our estimate. But here we have only taken account of the actually existing portion of the MS, and have left out of the reckoning those portions of the Old Testament which are lost, and the 43 leaves of the Cod. Friderico-Augustanus.

Scrivener estimates the total number of leaves of the MS down to the place where Hermas breaks off at 724 at the outside: and admitting this estimate, we should have 28,960 denarii for cost of transcription.

Then comes the question of the cost of the vellum, and here again the Diocletian edict helps us to an estimate. According to the first of our quoted lines, a quaternion of four sheets or eight leaves of parchment, a foot in length, was to be sold for 40 denarii; now the Codex Sinaiticus is just over the foot in length (the Roman foot being taken to be 11.69 inches): and the vellum is of very fine quality. Allowing, then, 90 quaternions to the complete work, we put at least 3600 denarii for the material, which added to our previous reckoning gives 32,560 denarii for the complete work. If, however, we only regard the portion properly known as the Codex Sinaiticus, we have to add 1720 denarii to 13,820, giving a total of 15,540 denarii.

We conclude that the cost of a complete Bible must have been about 30,000 denarii; and Constantine's fifty Bibles for the churches of Constantinople must have been produced at an expense not very different from 1,500,000 denarii. To represent this in modern

prose or poetry, is now generally copied upon this basis of count. I received, myself, about a month ago two texts of the *Kāṇḍika-sūtra*, a ritualistic work written in short condensed sentences, and in prose. These sentences contain mnemonic rules for the conduct of sacrifices and sacraments, and are in form and context as far removed from poetry as possible. One of the MSS was estimated at 1700 *çlokas*, the other at 1750. The difference in the number is due to actual differences in the text, and to the fact that the count is made in round numbers.

A similar statement will be found in Gardthausen: Griech. Paläographie, p. 132.

money is more difficult; perhaps we shall not be far wrong in taking the estimate of M. Waddington, that the denarius = .062 francs.

Birt (Antikes Buchwesen, p. 209) sets the denarius down at .024 marks of modern money. This would make the scribe's pay, for 100 lines of hexameter size, .96 mark, sufficiently small to be a correct estimate of scrivener's pay; for the shorter pattern, .6 mark per hundred; while the cost of production of a complete Sinaitic Codex stands at 720 marks or thereabouts. It is not a little curious that the estimate which we have made of the cost of production of the books ordered by Constantine should approach so nearly to the price set by Tischendorf on the splendid edition of Sinaiticus produced by order of the Emperor Alexander II of Russia.

7. There remains one line of our edict to discuss. The notary (observe the curious form *tabellario* for *tabellio*) or writer of the small book (*libellus*) or of tablets, is paid at a lower rate. According to the edict, he is paid only 10 denarii per 100 verses. We cannot be far wrong in assuming his lines to be half as short as the previous type; in other words, his lines are sensibly the same as the Sinaitic line, two of which go to the iambic *στιχος*. Now it is not unworthy of note that we find not a few manuscripts of the New Testament written on a model very little different from the Sinaitic Codex. They are a little shorter, averaging 11 letters to the line, and indicate an original written on very narrow strips of paper. To this type belong the MSS known as I, N, Γ (which are, perhaps, fragments of the same original); they are written in double columns, 16 lines to the page, and eleven letters to the line. Codex W is, perhaps, a little longer, 12 letters to the line, and in double columns, of 23 lines to the column.

8. The table which contains our calculation of the *στιχοι* for the separate books is deserving of a careful study. The first column is taken from Scrivener, p. 63 of Introduction to N. T. Criticism. He states that for the Gospels his figures are taken from Codd. G. S. and 27 Cursives named by Scholz. It will be observed that as a general rule the results of the second column exceed those of the third. But in the case of the Acts the order is nearly reversed. Probably the explanation is that the Acts is written more closely in Codex B than any other book, and so we have a smaller number of lines from which to calculate our *στιχοι*. The first column is at the beginning much

in excess of the second and third, probably in consequence of interpolations in the Gospels followed by Codices G. S, etc., or omissions in the great uncials. For the succeeding Epistles the second and third columns give as a rule results slightly in excess of the first, except for the Hebrews, where the Sinaitic Codex has some omissions to account for, and in James and I John.

We may actually test the results in the case of such short compositions as Philemon and the two shorter Epistles of John. By actual reckoning then on the II and III Epistles of John as given in Westcott and Hort's edition, we find 30 and 31 $\sigma\tau\acute{\iota}\chi\omega\iota$ respectively. The abbreviated forms are taken for $\theta\epsilon\bar{\omega}$, $\bar{\iota}\eta\sigma\bar{\omega}$, $\chi\bar{\rho}\iota\sigma\bar{\omega}$, but these abbreviations will not affect the result arrived at. For Philemon the same text gives 42 $\sigma\tau\acute{\iota}\chi\omega\iota$; but if we do not abbreviate we must add nearly sixty letters; the last $\sigma\tau\acute{\iota}\chi\omega\iota$ numbered 15 letters; and we have therefore to add about 39 letters or just over a verse, which brings the result very close to the calculation from the Sinaitic, or the estimate of M. Graux.

The result arrived at by M. Graux, and confirmed by our own researches, is in the first instance deduced from the fact that the average value of the $\sigma\tau\acute{\iota}\chi\omega\iota$, as calculated, fluctuates between very narrow limits. And I can imagine some one objecting that such a result would be a thing that any one might anticipate, and that we might just as well calculate the average length of a verse in the English Bible, and then draw the inference that these verses were constructed according to a pattern, which can hardly be believed in any strict sense. To reply to this objection, perhaps the simplest counter-argument would be to observe that, if there were really an average number of letters to the verse, fluctuating between limits as narrow in proportion as in the case of the number of letters to the $\sigma\tau\acute{\iota}\chi\omega\iota$, there ought to be an approximately uniform ratio between the number of $\sigma\tau\acute{\iota}\chi\omega\iota$ and the number of verses in the separate books; for if $\frac{m}{p}$ is approximately constant, where m is the whole number of letters in a book, and p the number of $\sigma\tau\acute{\iota}\chi\omega\iota$, and if $\frac{m}{q}$ is also approximately constant, where q is the number of verses, then $p:q$ is approximately a constant ratio. We can at once test this point by taking the number of $\sigma\tau\acute{\iota}\chi\omega\iota$ and verses as given by Scrivener, Introduction to N. T., p. 63. The result of the enquiry is as follows:

	<i>στιχοι.</i>	<i>Modern Verses.</i>	<i>Ratio.</i>
Matthew	2560	1071	2.390
Mark	1616	678	2.383
Luke	2740	1151	2.380
John	2024	880	2.300
Acts	2524	1007	2.506
James	242	108	2.240
I Peter	236	105	2.247
II Peter	154	61	2.524
I John	274	105	2.514
II John	36	13	2.307
III John	32	15	2.133
Jude	68	25	2.720
Romans	920	433	2.124
I Cor.	870	437	1.990
II Cor.	590	256	2.304
Galat.	293	149	1.966
Ephesians	312	155	2.013
Philipp.	208	104	2.000
Coloss.	208	95	2.189
I Thess.	193	89	2.168
II Thess.	106	47	2.255
I Tim.	230	113	2.035
II Tim.	172	83	2.072
Titus	98	46	2.130
Philemon	38	25	1.520
Hebrews	703	303	2.320
Revelation	1800	405	4.444

That is (leaving out the case of Revelation, where the number of *στιχοι* is obviously apocryphal), the ratio varies between 1.52 and 2.72, which is more divergent than 3 to 5. In the longer compositions the ratio tends to uniformity, as we should expect. It is clear, then, that the average of M. Graux's results is something more than a mere numerical average, and implies the existence of an underlying type.

9. It is important that we should grasp the bearing of the previous researches upon the antiquity of the texts contained in the two great Uncials. Scrivener, in his collation of the Codex Sinaiticus, draws attention to the remarkable resemblance of the writing to that of the Herculanean papyri, none of which, as he ingeniously remarks, can be dated below A. D. 79. He draws a similar com-

parison with regard to the almost entire absence of marks of punctuation.¹ "The two manuscripts are near akin. In the Hyperides papyri are no stops at all, in the Herculanean very few."² With regard to the columnar arrangement his remarks are even more suggestive. "Still more striking is the likeness which Cod. Sinaiticus bears to these records of the first century in respect to its outward form and arrangement. The latter are composed of narrow slips of the papyrus, the writing on which is seldom more than 2 or 2½ inches broad, glued together in parallel columns, and kept in scrolls which were unrolled at one end for the purpose of reading, and when read rolled up at the other . . . the appearance of the Sinai manuscript, with its eight narrow columns (seldom exceeding two inches in breadth, exhibited on each open leaf, suggests at once the notion that it was transcribed line for line from some primitive papyrus, whether written in Egypt or elsewhere."³

The main point to be noted is that the papyri from which our great manuscripts are transcribed must have been closely related, almost line for line, to the *original* papyri of the Gospels and Epistles, *or it is extremely unlikely that they would end in any other way on the pages than by random distribution.* And thus our investigation constitutes the proof of the important statement of Westcott and Hort, that "the ancestries of these two manuscripts diverged from a point near the autographs." They might almost have said "from the autographs." But when we establish this result, we reserve the important qualification, that these MSS are not exempt from occasional errors of omission or insertion of whole sheets and lines; nor are they entirely free from that error which arises from a derangement of the order of the sheets of which the original document was composed. The latter I believe to be peculiarly the case with the Gospel of John. How far such omissions and excisions are wilful, it is impossible to say; it is to such a case that the remark of Tertullian applies when he accuses Marcion of using not the pen, but the knife in his dealing with documents. He probably means to imply that whole strips of papyrus had disappeared from the rolls. But I think it will be found upon a closer examination of this difficult point, that the character of Marcion has been unnecessarily blackened, and that in many respects he will turn out to be almost a champion of textual purity. It became the fashion to brand every omission from

¹ Scrivener, Collation of Codex Sinaiticus, p. xiv.

² P. xxviii.

³ P. xxx.

the ordinary Church MSS with the name of Marcion. We find this charge made even by so noble a spirit as Origen with regard to the concluding verses of the Epistle to the Romans.

We now annex the table which gives the comparison between the number of *στίχοι* as quoted from early codices, and the number as calculated from the lines enumerated in tables I and II for the several books of the New Testament, on the basis of a number of lines in St. John's Gospel actually measured into *στίχοι*. Since we find our results frequently in coincidence or near it, and seldom differing from one another more than 5 per cent., the result is confirmatory of the previous statements made as to the fixed length of the *στίχος*. When allowance has been made for the omissions and insertions in the MSS, we may perhaps find it useful to recalculate the figures given.

TABLE IV.

	$\sigma\tau\acute{\iota}\chi\omega\acute{\iota}$ from the second hand of the Sinaitic Codex.	$\sigma\tau\acute{\iota}\chi\omega\acute{\iota}$ estimated for the Vatican Codex.	$\sigma\tau\acute{\iota}\chi\omega\acute{\iota}$ estimated for the Vatican Codex.	$\sigma\tau\acute{\iota}\chi\omega\acute{\iota}$ estimated for the Vatican Codex.	$\sigma\tau\acute{\iota}\chi\omega\acute{\iota}$ from the second hand of the Sinaitic Codex.	$\sigma\tau\acute{\iota}\chi\omega\acute{\iota}$ from the second hand of the Sinaitic Codex.
Matthew	2560	2442	2401		2560	
Mark	1616	1492	1470		1616	
Luke	2740	2629	2583		2750	
John	2024	1865	1861		2024	
Acts	2524	2497	2526		2556	
Romans	920	944	918		920	
I Cor.	870	886	885		870	
II Cor.	590	608	607	612	590	
Galatians	293	293	293	312	293	
Ephesians	312	317	313	312	312	
Philippians	208	216	210	200	208	
Colossians	208	219	212	300	208	
I Thess.	193	205	198		193	
II Thess.	106	112	105	180	106	
I Tim.	230		239	250?	230	
II Tim.	172		174	180	199	
Titus	98		100	96	97	
Philemon	38		43		42	
Hebrews	703		670	750	703	
James	242	242	236		242	
I Peter	236	244	245		236	
II Peter	154	168	164			
I John	274	262	263		274	
II John	30	31	31		32	
III John	32	31	31		31	
Jude	68	70	71		68	
Revelation	1800		1179			

$$\begin{aligned} & \text{V-line} \\ & \quad = 149 \quad \sigma\tau\acute{\iota}\chi\omega\acute{\iota} \\ & \text{S-line} \\ & \quad = \frac{149}{326} \sigma\tau\acute{\iota}\chi\omega\acute{\iota} \\ & \quad = 414 \quad \sigma\tau\acute{\iota}\chi\omega\acute{\iota} \\ & \log 326 - \log 149 \\ & \quad = -3.400013 \\ & \log 414 - \log 149 \\ & \quad = -4.38340 \end{aligned}$$

C. 1. When we proceed to examine in detail the various readings and errors of the principal manuscripts in the Catholic Epistles, we come to the conclusion that there is nothing to affect our results in the two smaller Epistles of John, nor in the Epistle of James. With regard to the first Epistle of John, the only passage where we can regard the text of B as uncertain is in IV 3, where the words *χριστὸν ἐν σαρκὶ ἐληλυθότα* are omitted, the length of the omission being a V-line, and the passage being retained by the Sinaitic Codex; and at IV 21 there is a line omitted by B. Then we come to the question of the celebrated passage I John V 7, or the "Three Heavenly Witnesses"; the text of this would occupy about five V-lines. Our method of investigation agrees with every other applied critical test in rejecting the words. The abnormal excess of the number of *στιχοί* noted in some early codices of St. John over the number as calculated by ourselves, leads to the suspicion that there may have been Greek codices, now lost, in which the words occurred. The defenders of the passage, if there are any left, can actually count the *στιχοί* in the first Epistle of John and compare their results with the number as given by Scrivener. The disputed passage is a matter of 3 *στιχοί*.

2. The Epistle of Jude is an interesting study from our point of view. There are no various readings that are likely to affect the arrangement of the Epistle; in the 15th verse the text of the Sinaitic is perplexing, and in the 25th verse both the oldest codices agree in the addition of two V-lines to the ordinary text. But the significant feature of the examination of the text is the discovery that the scribe of the Sinaitic Codex has in v. 12 mistaken the *οὐτοὶ εἰσῶν* of the verse for the same words in v. 16, and has consequently interpolated four lines from that verse before detecting his error and returning to the proper passage. His eye has, *apparently*, wandered from the top of a column nearly to the bottom in search of the words which he had either recently transcribed or was proposing to transcribe. We need scarcely say that such a supposition is extremely unlikely. When, however, we restore the pages to the S-form, as they may be easily exhibited, we see that the scribe's eye has really only wandered from the first line of the column he was transcribing to the first line of a column not very remote from it, and commencing with the very same words. And this is so thoroughly likely that it must be regarded as no slight confirmation of our theory of the subdivision of the columns.

It is not to be necessarily inferred that the Epistle was originally written on the S-page; we have already seen reason to assume the opposite type (unless, indeed, the doxology should be shown not to be genuine); but the point that we press is the fact of the reduction of smaller pages into the form given in the Sinaitic Codex. From the same enquiry another result follows: the ratio of the S-lines to the V-lines for this Epistle was abnormally high, but when we proceed to subtract the four lines inserted by the Sinaitic, and recalculate the ratio, we find 1.268 instead of 1.293.

3. We proceed to examine the text of the first Epistle of Peter, which we do more in detail in order to illustrate the methods by which we restore the text, prior to dividing it into the smaller pages.

I Peter.

	Letters.	Text Rec.	N	B.	W. H.	Tr.
I 22. διὰ πνέυματος	12	+	—	—	—	—
I 23. εἰς τὸν αἰώνα	11	+	—	—	—	—
III 5. ἐκόσμουν ἔαντάς	14	+	—	+	+	+
III 7. κατὰ γνώσιν	10	+	—	+	+	+
IV 5. ἀποδώσοντιν λόγον	16	+	—	+	+	+
III 16. ὑμῶν ὡς κακοποιῶν	15	+	+	—	—	[—]
IV 14. καὶ δυνάμεως	11	—	+	—	—	—
IV 14. κατὰ μὲν αὐτοὺς βλασφη- μεῖται κατὰ δὲ ὑμᾶς δοξά- ζεται	44	+	—	—	—	—
V 2. ἐπισκοποῦντες	13	+	—	—	—	+
V 5. ὑποτασσόμενοι	13	+	—	—	—	—
V 10. θεμελιώσαι	10	+	+	—	—	—

In addition B omits the whole of V 3, containing 58 letters, *i. e.* between 3 and 4 Vatican lines, which will certainly make the text eight Vatican columns, and 36 lines, but it does not fill the page. In the Sinaitic we have, besides the variants noted, and some smaller ones, six short columns, so that in S-pages we have 14 columns and one or two lines, which seems to indicate 56 S-pages. The letters missed or inserted look like complete Sinaitic lines, which again confirms our opinion that the original form of the document is the S-page.

When we add the missing lines to the texts and calculate afresh the ratio of the V-line to the S-line, we have 1.250.

Another remarkable confirmation of our subdivision of the Sinaitic pages is found at II 12 of this Epistle. The scribe left his work at the beginning of the 21st S-page, where he was about to transcribe the words *δοξάσωσι τὸν θεόν*. These words stand at present at the second line of the page. But, in returning to his task, he opened at the second Epistle of Peter by mistake, and here at the 11th verse of the second chapter he found the key-word *δόξας* and began to write *δόξας οὐ τρέμοντι*, thus transcribing what would be the first line of the 19th S-page in the second Epistle of Peter. The traces of the error still remain. *And it is impossible to give a rational explanation of the aberration of the scribe unless we subdivide the pages in the manner we have indicated.*

3. In the 2d Epistle of Peter we rectify the text in a similar manner, the two most important phenomena being that the Sinaitic scribe has in I 12, 13, omitted 8 lines, from *διὸ μελλήσω το διεγέρειν*, and that the error is almost balanced by the existence of nine short columns.

More important still is the light which the rectification of the pages throws on a very difficult passage in III 10, where the reading adopted by Westcott and Hort is a source of immense merit to Dr. Burdon. The ordinary reading in this passage is

καὶ γῆ καὶ τὰ ἐν αὐτῇ ἔργα κατακαήσεται.

For *κατακαήσεται* (which is the reading of A, L, the Clementine Vulgate, the Memphitic, and some other versions) the two earliest MSS read *εὑρεθήσεται*, and are supported by sundry versions and by Codex K. Codex C suggests *ἀφανισθήσονται*.

Tregelles and Westcott and Hort import the utterly meaningless *εὑρεθήσεται* into the text, apparently on the ground that it is safe to follow ten times in succession a group of manuscripts which is demonstrated to be reliable in nine cases out of ten.

Burdon, on the other hand, will have the ordinary reading to be correct, and affirms the reading of Codices *X* to B to be a rude attempt of some Western scribe to translate or transliterate the Latin word *urentur!* More strangely still, so judicious a critic as Farrar is found supporting this peculiar suggestion, and even claims the paternity of the monster. Thus he remarks: "It had occurred to me, before I saw it remarked elsewhere, that it might be some accidental confusion with the Latin *urentur*" (Early days of Christianity, p. 121).

We now turn to the Sinaitic Codex, and observe that exactly 24 lines beyond the disputed passage lie the words *αὐτῷ εὑρεθῇ | ναι ἐν*

εἰρήνη. Moreover, the passage in dispute occurs within a line of the bottom of one of the Sinaitic columns, and, in all probability, when the passage is rectified, the words are either the highest or the lowest line of an S-page. The scribe's eye, therefore, wanders laterally two columns, and hence the word *εὐρέθησεται*. This explains the origin of the variant. We infer also from the discrepancy of later copies that we have here a case in which the original reading is entirely lost and the text has been restored by a conjectural emendation.

Further, since the error took place in a MS of the S-type, it follows that that type is nearer to the autograph of the Epistle than any other, which is exactly in accordance with our previous enquiry; for, otherwise, some manuscript would, doubtless, have conserved the original reading. The conjectural restoration made by the early MSS is not based upon any critical study of the text; and in order to fill the blank left by the removal of *εὐρέθη*, we must endeavor to determine the causes which led to the error. These are (1) the similarity of *αὐτὴν* in v. 10 to *αὐτῷ* in v. 14; (2) the similarity either to eye or ear of the words which have become confounded.

A reading which would satisfy both conditions would be *ἐκρυθήσεται*, which Professor Gildersleeve suggests.¹ We find a similar word *ἀπορρυθήσεται* in some MSS of Barnabas c. 11, the passage being really a quotation from the first Psalm; and *ἐξερύνημεν* is the word used for the fading leaf in Isaiah 64, 5. This exactly expresses the idea of the writer.

4. We now turn to the Pauline Epistles, in which we return to our first approximation to the number of the original pages of the autographs, and examine the manner in which the results are affected by the principal errors, reserving all our conclusions for a closer scrutiny in connexion with the original documents at some later time. It is extremely unfortunate that there is no critical apparatus to the New Testament except Scrivener's collation of the Sinaitic, which records the accidental omissions or repetitions of the great uncials; we are, therefore, obliged to collate for ourselves the text of every book, in order to see that no lines are dropped or repeated. And this, in spite of the compensations arising from a close study of the early arrangement of the text, is somewhat tedious and demands a great deal of time.

¹ I see that Westcott & Hort make a similar suggestion in their introduction, and disown the very reading which they adopt.

I Thessalonians.

	Letters.	Text Rec.	R	B.	W. H.	Tr.
I 1. ἀπὸ θεοῦ πατρὸς ἡμῶν καὶ κυρίου Ἰησοῦ Χριστοῦ	?24	+	+	—	—	—
II 16. τὰς ἀμαρτίας	11	+	+	—	+	+
III 2. καὶ συνεργὸν ἡμῶν	15	+	—	[+]	—	—
V 8. καὶ ἀγάπης	9	+	—	+	—	—

These are the only three readings of any importance. The Epistle is written on the V-page to the full, and will not bear any additions; we agree with the editors in rejecting the first reading. The second reading is remarkable, as there has been a conflation by the Textus Receptus and late copies of the two simple readings *καὶ διάκονον τοῦ θεοῦ* and *καὶ συνεργὸν ἡμῶν*. Either of the alternative readings may be taken, and the length of the Epistle is not affected by our choice, provided we do not make the error of conflation and take them both.

The third reading is an omission on the part of the Sinaitic. At II 13 the Sinaitic has repeated 10 lines by *όμοιοτέλευτον* of the letters *ωντονθεον*. We have thus to reduce the estimate made for the Sinaitic Codex by 11 lines, and leaves us with 11 columns and 10 lines, or very nearly 45 S-pages.

But now the question arises, why should the scribe have wandered back 10 lines in search of *τοῦ θεοῦ*? The interval is a very improbable one as the MS is written, but when the pages are rectified it will be found that the aberration of the scribe's eye is almost entirely lateral, and does not amount to a couple of lines vertically.

5. II Thessalonians : Here we have both codices ending unevenly, the Sinaitic at the third line, and the Vatican at the 34th line. The text, moreover, is extremely exact. Marcion is said to have omitted in I 8 *ἐν φλογὶ πυρός*, 13 letters; in II 4 the Sinaitic omits *καὶ ὑπεραιρόμενος*, 16 letters; and in II 15 it omits *οἱ ἀγαπήσας ἡμᾶς*, 12 letters. In III 4 the Vatican text has inserted *καὶ ἐποήσατε*, 12 letters. These seem to be all the readings of any importance.

A reference to the Codex Sinaiticus shows us the following peculiarity: it has twice made a single line of the two letters *χῦ*, and twice made a single line of *ιῦ χῦ*; the four instances are as follows:

I 2. *ιῦ χῦ* a fresh line, probably rendered necessary by the insertion of the word *ἡμῶν*.

I 8. *εναγγελι | ω τον κῦ ημων ιῦ | χῦ*, where the word *χῦ* is rejected by all the editors.

I 12. *κατα την χαριν του | θῦ ημων και κῦ ιῦ | χῦ*, where the word seems genuine.

II 14. *περιποιησιν δο | ξης του κῦ ημων | ιῦ χῦ*, where the last line is genuine.

There are one or two other very short lines. It is probably in these short lines that the explanation is to be sought of the three extra lines above pattern in the Sinaitic Codex. It will be observed that the errors of the Epistle are mainly S-errors. We conclude that the Epistle is probably represented by 24 S-pages. The result is confirmed by observing that in III 4, B has conflated the two readings *ποιεῖτε και ποιήσετε, ἐποιήσατε και ποιεῖτε και ποιήσετε*. It seems unlikely that this would happen if the text of B in this Epistle were modelled on the original tradition.

6. I Corinthians : The text is very good. At the beginning of c. XIII the scribe of the Sinaitic has dropped 134 letters, from *γέγονα χαλκὸς το ἀγάπην δὲ μὴ ἔχω*. The error, which is almost exactly 10 S-lines, was due to the fact that a previous sentence ended also with *μὴ ἔχω*. Moreover, the error is facilitated, as in the case mentioned above, by the existence of the smaller pages, which bring the two similar passages into contiguity. Other errors are the repetition of four lines in I 8, the omission of four lines in II 15, the omission of a line in X 19; of two lines in XV 13, and of four lines in XV 26, 27.

	Letters.	Text Rec.	N	B.	W. H.	Tr.
I 27. <i>ἴνα τοὺς σοφοὺς . . .</i> έξελέξατο ὁ θεός	54	+	+	+	+	+
III 3. <i>καὶ διχοστασίαι</i>	14	+	—	—	—	—
VII 5. <i>τῇ νηστείᾳ καὶ</i>	12	+	—	—	—	—
XI 24. <i>λάβετε φάγετε</i>	12	+	—	—	—	—

Our table must now be corrected so as to make the epistle 206 S-pages and several lines.

7. II Corinthians : The principal errors are as follows :

	Letters.	Text. Rec.	N	B.	W. H.	Tr.
VIII 4. <i>δέξασθαι ἡμᾶς</i>	12	+	—	—	—	—
IX 4. <i>της κανχήσεως</i>	12	+	—	—	—	—
XII 7. <i>ἴνα μὴ ὑπεραίρωμαι</i>	16	+	—	+	+	[—]
XII 11. <i>κανχώμενος</i>	10	+	—	—	—	—

Here the errors, though few, are chiefly of the S-type ; from the readings given we might perhaps add 16 letters to the Sinaitic text. But this would still leave a large blank in a sheet. On the other hand,

the V-pages fit exactly, only we must allow for the omission by B of a line in I 13 and the repetition of four lines in III 16.

8. The Epistle to the Romans does not seem to conform, as yet, very closely to any type.

Perhaps the explanation of this fact may be in the repetition by Codex B of four lines at IV 4, from ὁ μαθὼς to ἐργαζομένῳ. This would make the Epistle 148 V-pages.

There is a further difficulty about the concluding salutations and doxology, the consideration of which is very important, because in the first place Origen¹ distinctly charges Marcion with having excised them; secondly, we find them inserted in some codices at the end of the fourteenth chapter; thirdly, some codices, notably Codex A, which can hardly ever resist an opportunity of conflation of documents, have retained the doxology in both places; fourthly, Marcion is also charged with the excision of the remainder of the Epistle from the end of the fourteenth chapter. It becomes interesting to examine the length of this portion in Vatican type. At present it does not look as if Marcion had done anything of the kind attributed to him.

The doxology starts at the top of a column, ΤΩΔΕΔΥΝΑΜΕΝΩΥΜΑΣ, and occupies in the manuscript 16 lines and 4 letters. Moreover, the portion from Rom. XVI 1 to the end which contains all those very doubtful salutations to people whom one can hardly believe to have been at Rome, contains very nearly 10 V-pages with the doxology; or nearly 9 V-pages without it. We may conjecture that these 9 V-pages are really a part of the subscription to another Epistle. It is not, however, a point material to our hypothesis, viz. that the Epistle to the Romans was written on the V-page.

In Romans the text is very exact.

		Letters.	Text.	Rec.	N	B.	W. H.	Tr.
VIII 1.	μὴ κατὰ σάρκα . . . κατὰ							
	πνεῦμα	37	+	—	—	—	—	—
IX 28.	ἐν δικαιοσύνῃ . . . συντετμημένον	33	+	—	—	—	—	—
X 15.	τῶν εὐαγγ. εἰρήνην	25	+	—	—	—	—	—
XI 6.	εἰ δὲ ἐξ ἐργῶν . . . οὐκ ἔτι ἔστιν							
	ἔργον	53	+	—	[+]	—	—	—
XII 17.	ἐνώπιον τοῦ θῦ καὶ	15	+	—	—	—	—	—
XIII 9.	οὐ φευδομαρτυρήσεις	18	+	+	—	—	—	—
XIV 6.	καὶ ὁ μὴ φρονῶν . . . οὐ φρονεῖ	31	+	—	—	—	—	—
XIV 21.	ἡ σκανδαλίζεται ἡ ἀσθενεῖ	22	+	—	+	—	—	+
XV 13.	εἰς τὸ περισσεύειν ὑμᾶς	20	+	+	—	+	+	+
XV 32.	καὶ συναναπαύσωμεν ὑμῖν	21	+	+	—	+	+	+
XVI 12.	ἀσπάσασθε Περσίδα κ. τ. λ.	49	+	+	+	+	+	+
XVI 24.	ἡ χάρις τοῦ κυ. κ. τ. λ.	39	+	—	—	—	—	—

¹ Orig. Int. IV 687.

The majority of these readings are of the V-type, and the text can now be easily rectified. The question of the salutations is more difficult; as already stated, we conjecture that they are a separate document, really intended as a codicil to the Ephesian Epistle; but, having been written on the V-type, a mistake easily arose in reducing the documents, and finding an Epistle of the S-type carrying final leaves of the V-pattern.

9. Galatians: The only reading of any importance is in III 1:

Letters.	Text. Rec.	N	B.	W. H.	Tr.
τῇ ἀληθείᾳ μὴ πείθεσθαι	20	+	—	—	—

We can, at the most, add one line to the Vatican text; but this we must not do, first, because of the consensus of authorities and editors against the reading; and, secondly, because the large writing of St. Paul in the close of the Epistle would run over into another page if the reading were admitted, a most improbable event. On the other hand, B has repeated a line in I 11.

There is no reasonable conclusion other than that the Epistle to the Galatians was written on 47 V-pages. The single reading quoted seems to be of the V-type.

10. Ephesians: At first sight this Epistle seems not to be written on full sheets; or, if so, not on sheets of the V- and S-type. In one Codex, B, it occupies 16 columns and 22 lines, *i. e.* six lines less than 50 V-pages; and in the other it occupies 18 columns and five lines, *i. e.* seven lines less than 73 S-pages. We proceed to examine the codices, and to discuss those variations of the text which may affect seriously the space that it occupies.

And first of all we find that the scribe of N has omitted the seventh verse of the second chapter, which has been inserted in a footnote. The reason of this error lies in the fact that both the sixth and seventh verses close with the words *εν χω τι*, and probably at the same part of the Sinaitic line. The 101 letters of this verse show that it would occupy about seven or eight lines of Sinaitic type. Adding them we correct our table, which now states that Ephesians in the Sinaitic Codex occupies 73 S-pages and one line. Further, he has repeated three lines in VI 3, in the words *ινα εν σοι | γενηται και εση | μακροχρονιος | επι της γης*. At III 18 he has again repeated a line. This makes the Epistle 73 S-pages, all but three lines.

We now proceed to discuss the various readings.

	Letters.	Text. Rec.	N	B.	W. H.	Tr.
I 1. ἐν ἐφέσῳ	7	+	—	[+]	[+]	+
I 3. καὶ σωτῆρος	10	—	+	—	—	—
I 15. τὴν ἀγάπην	9	+	—	—	—	+
III 14. τοῦ κυ ιμᾶν χῦ ἰ	13	+	—	—	—	—
V 22. ὑποτάσσεσθε	11	+	—	—	—	—
οἱ ὑποτάσσεσθωσαν	14	—	+	—	—	+
V 30. ἐκ τῆς σαρκὸς αὐτοῦ καὶ ἐκ						
τῶν ὀστέων αὐτοῦ	35	+	—	—	—	—
VI 12. τοῦ αἰῶνος	9	+	—	—	—	—
VI 20. τοῦ εὐαγγελίου	13	+	+	—	[+]	+

These are the principal passages, and we see that on the most extreme methods of criticism it would be possible to add five to seven lines to the Sinaitic Codex, or in the opposite direction to remove two lines. But it is evident that there are really only two passages to discuss, the one a question of adding a line to the Sinaitic text, the other of subtracting two lines. These readings can hardly affect our result, which gives us 73 S-pages. This Epistle is a good illustration of the rule that a document originally written on the V- or S-pattern will show a majority of V- or S-errors, as the case may be.

11. Philippians: Here there are only two important readings:

	Letters.	Text. Rec.	N	B.	W. H.	Tr.
III 16. κανόνι, τὸ αὐτὸ φρονεῖν	19	+	—	—	—	—
III 21. εἰς τὸ γενέσθαι αὐτὸ	17	+	—	—	—	—

Its errors are both of the V-type. The Codex B shows us 33 V-pages in the Epistle, which will not, therefore, admit of an extra line being inserted. But in noticing this apparent leaning to the V-type, we must not forget that the Epistle is only three lines short of a page in the S-type, which allows us, if we think proper, to admit one or both of the longer readings. Moreover N has dropped a line at II 18.

12. Colossians: Here we had 11 columns and 15 lines in Codex B.

12 " 13 " Sinaitic.

In either case just over the page, which is the most improbable thing that can happen.

The principal readings are :

	Letters.	Text.	Rec.	R	B.	W. H.	Tr.
I 2. <i>καὶ τοῦ κῦ χῦ ιῦ</i>	9	+	+	—	—	—	—
I 6. <i>καὶ αὐξανόμενον</i>	14	—	+	+	+	+	+
I 14. <i>διὰ τοῦ αἵματος αὐτοῦ</i>	15	+	—	—	—	—	—
I 25. <i>ἐγώ Παῦλος διὰ</i>	12	—	+	—	—	—	—
II 2. <i>καὶ πατρὸς καὶ τοῦ</i>	15	+	[+]	—	—	—	—
II 11. <i>τῶν ἀμαρτιῶν</i>	11	+	—	—	—	—	—
III 6. <i>ἐπὶ τοὺς νιοὺς τῆς ἀπειθείας</i>	24	+	+	—	—	—	—

Of these readings I 2 is an exact line in the Sinaitic, it is probably an addition. I 6 is also an exact line, and has been dropped by a few codices. I 14 is generally admitted to be an interpolation. At I 23 and at I 25 a line has been added by R. II 2 is very doubtful. II 11 is probably an addition. III 6, the passage is rejected by B only, and perhaps D ; it is very likely genuine. We infer that of three places where the Sinaitic contradicts the Vatican, it is incorrect in two of them. The Epistle is now one or two lines short of 49 pages of the S-type. The errors are about evenly divided between the two types. The result is confirmed by observing that in I 12, Cod. B has been guilty of conflation of the two readings *ικανώσαντι* and *καλέσαντι*, so as to make *καλέσαντι καὶ ικανώσαντι* ; it seems hardly likely, then, that B contains the original type of the text of Colossians.

13. Philemon is, as already shown, 10 S-pages exactly.

14. Now let us examine the arrangement of the Gospel of Luke. Our enumeration of columns and lines gives us for the Gospel 401 V-pages or 598 S-pages. But neither of these results can be accepted, on account of the numerous and important variants which have to be considered. It is interesting to notice that the two results are very nearly in the ratio of 2 : 3. This would be exactly the case if two codices were written, one on a 12-lined page and with 14 letters to the line, and the other on a 14-lined page and with 18 letters to the line, for $12 \times 14 : 14 \times 18 = 2 : 3$. Now the two great MSS very nearly fulfil this condition ; it does not, therefore, surprise us if, when one codex suggests 400 V-pages, the other suggests 600 S-pages.

Now, turning to the Gospel of Luke, we notice in the first place that the passage containing the account of the Agony in the Garden has been excised from or is wanting in the chief exemplars. The Vatican Codex omits, the Sinaitic brackets it. I pointed out in my recent lectures that it was conceivable, as Epiphanius states, that

καιεκλαύσε
ωφθιδεαύτωαρ
Γελοσαπτουρανού
ενισχυωναύτον
καιγενομενοσε
ναρωνιαεκτενε
στερονπροσνυ
χετοκαιεγενετο
ιδρωσαυτογωσι
θρομβοιαιματοσ
καταβαινοντεσ
επιτηνγην

the passage was excised for doctrinal reasons, and that there were probably other words, *καὶ ἔκλαυσε*, which had never found their way back into the text.¹ Counting the letters of the doubtful passage, and adding, if it be thought necessary, 10 letters for *καὶ ἔκλαυσε*, we have 155 letters, or almost exactly an S-page. Here we have a strong intimation that the Gospel was originally written on the S-page, and that the account of the Agony is an authentic part of the text, easily lost or excised.

Turning to the Sinaitic Codex we find that the passage occupies eleven lines exactly, without the words added by us, and is evidently easily detached from the main body of the text. In the plate annexed the passage is completed, and given as a specimen of the S-page.

Assuming for the present that the S-page is the original form of Luke, we examine the next important passage, bracketed by Westcott and Hort, Luke XXII 19, 20 from *τὸ ἵπερ ὑμῶν διδόμενον . . . τὸ ἵπερ ὑμῶν ἐκχυνόμενον*. At first sight it seems that the omission of this passage by the Western text might be due to *δόμοιοτέλευτον*, but a closer examination shows that it contains 152 letters, or almost exactly an S-page; in the Sinaitic Codex it occupies 12 lines and 7 letters, but one of the lines is a very short one and has only three letters. It looks again as if an S-page had been either omitted or inserted; if both the passages which we have discussed were actual pages of the original document, the intervening space ought to be an exact number of S-pages, *i. e.* the space between the *ἐκχυνόμενον* of the second passage and the commencement of the account of the agony in the garden. Examination of the MS shows the intervening space to be a column and 33 lines, or within three lines of being 7 S-pages. It is doubtful, therefore, whether this passage be an integral part of the original document; and bearing in mind the suspicious resemblance to a passage in I Cor., we leave the matter in suspense until we have examined the remaining variants. If we see reason to conclude that it is really a part of the text, we shall most probably find that there has been some displacement of the text in the neighborhood. Before passing we observe that the 34th verse of the XXIII chapter, which Westcott and Hort bracket, is also marked with suspicion in the Sinaitic and occupies four lines of the text.

The doubtful 12th verse of chap. XXIV in the Sinaitic Codex begins a line, and occupies 8 lines all but four letters; moreover, the passage has dropped four letters from the text en route in the word *μόνα* after *δόθοντα*.

¹ Epiph. Ancor. xxxi.

We now proceed to examine the text in detail, much in the same way as we discussed the Gospel of John; the list of variants is very long, as the text is many times more corrupt than that of John, and we therefore content ourselves with giving approximate results, deduced from a long array of doubtful passages.

The first thing that strikes us in studying the portentous list of various readings is that the greater part of the book is marked by omissions, but when we come to the last two chapters we find a large number of suspicious additions, contradicted by the Western text. It looks painfully like as if the space lost by omissions in the early parts of the book had been utilized in the latter part for some additional matter. Examining the cases where the Sinaitic text is erroneous, or probably erroneous, we have on the whole, up to XXII 25, forty-six lines to add, the criticism of the text being comparatively easy. Now the doubtful passage contained in XXII 43, 44 begins on the tenth line from the bottom of a column, but when the forty-six lines are added it falls at once into the proper place, the last section of a column. This would leave the Gospel, if undisturbed, to finish on the 23d line of a column; but now the criticism becomes extremely difficult.

- In XXII 31. The MS is probably correct.
- XXII 64. " "
- XXII 68. " "
- XXII 62. Two lines have perhaps been added.
- XXIII 17. Three lines must be removed.
- XXIII 38. Correct.
- XXIII 34. Probably four lines have been inserted, but the passage is very difficult.
- XXIV 12. Eight lines perhaps added.
- XXIV 31. A line lost.
- XXIV 4. A line probably added.
- XXIV 6. Two lines probably added.
- XXIV 40. Four lines perhaps added.
- XXIV 36. Two " "
- XXIV 46. } Text correct.
49. }
- XXIV 51. Text probably correct.
- XXIV 52. Probably two lines added.
- XXIV 53. Text probably correct.

The result being that 23 lines have been probably added, if we retain the passage XXIII 34 as probably authentic. That is to

say, 2 S-pages, all but a line, have now to be removed. But we added previously 4 S-pages, all but a line (if we reckon *καὶ ἔκλαυσε* in XXII 43); we have therefore on the whole added two S-pages, together with a lost page. Our original estimate was 598 S-pages, it is now 601 S-pages. Nothing can be more significant than this number of the fact that an S-page too many has crept in, and it can hardly be any other than the passage which we were in doubt about in XXII 19; we therefore finally decide to remove it.

The analysis has been extremely suggestive to our own mind; we started out with the prospect of reinserting the majority of the passages usually reckoned as doubtful, but the singular predominance of additions in the closing chapters over omissions has finally led us to reject those passages, or the majority of them, in accordance with the Western text; and we have finally ended with a book of 600 pages almost exactly, which we are now prepared to print on what we believe will represent, *quam proxime*, the original sheets of uncial writing. It will be observed that the frequency of errors of the S-type in the analysis of this Gospel confirms our supposition that this is the original form of the Gospel.

15. The Acts of the Apostles is one of the books which we have indicated to ourselves as likely, from its abrupt conclusion, to be written on full sheets. When we proceed to examine the principal doubtful passages, we shall find that the majority of the errors are of the S-type. There are nearly fifty passages that have to be examined, and from these, by the use of the best critical apparatus, we proceed to correct the text of the Sinaitic Codex, in which the S-type, if it exists, is preserved.

The following are the passages requiring change:

- II 9. + *καὶ ἐλαμῆται*.
- II 20. + *καὶ ἐπιφανῆ*.
- II 21. A whole verse has been omitted, 4 S-lines.
- II 43. A sentence has been inserted, 38 letters: *ἐν Ἱερουσαλήμ φόβος τε ἦν μέγας ἐπὶ πάντας καὶ*.
- VII 60. + *φωνῇ μεγάλῃ*.
- IX 12. + *ἐν δράματι*.
- XIII 23. + *ἀπὸ τοῦ σπέρματος*.
- XIV 20, 21. Two verses omitted, 66 letters, 5 S-lines.
- XV 32. + *καὶ ἐπεστήριξαν*.
- XXI 13. + *κλαίοντες καὶ*.
- XXI 22. — *δεῖ πλῆθος συνελθεῖν*.
- XXVIII 27. + *καὶ τῇ καρδίᾳ συνώστιν*.

This leaves us on the whole with about 14 lines to add to the Sinaitic text, which now occupies (a result by no means aimed at, and scarcely anticipated) 144 columns and 24 lines, or 578 S-pages. I do not however regard this result as more than a rough preliminary examination.

I am inclined to believe that a number of pages have been lost from the conclusion of the book. The celebrated passage VIII 37 consists of about 96 letters, perhaps 8 S-lines; so it cannot be restored, on the ground of a page having been lost from the original document. It is not unworthy of note that we have seen reason to refer the Gospel of Luke to the same type and to an original document of about 600 unit sheets.

16. We shall now defer the examination of the remaining books, reserving the discussion of them, together with the important question of the closing verses of St. Mark, and some other points of interest, for another occasion; and we shall conclude this present article by a brief examination of one or two early uncial texts by the light of the results already obtained, and by indicating a more general method of determining the autograph forms of any given collection of letters.

D 1. Codex Alexandrinus is written in tolerably uniform lines, and in double columns. The number of lines to the page is normally 50, but sometimes 51, and in one or two instances we note 49. In other words, the normal size of the page copied has been affected by omissions and additions, but principally the latter. The table for this codex is as follows :

	Columns	Lines
Matthew begins at c. XXV 6	?	6
Mark	50	17
Luke	86	20
John	53	48
or counting the two leaves lost VI 50 to VIII 52	61	48
Acts	80	7
James	7	48
I Peter	7	47
II Peter	5	11
I John	10	26
II John		49
III John		51
Jude	2	6
Romans	28	32

	<i>Columns</i>	<i>Lines</i>
I Cor.	28	21
II Cor.	19	38
Galatians	9	39
Ephesians	10	39
Philippians	6	48
Colossians	6	48
I Thessalonians	6	27
II Thessalonians	3	23
Hebrews	23	16
I Tim.	7	31
II Tim.	6	14
Titus	3	19
Philemon	1	18
Revelation	34	28

It will be observed that II John and III John no longer agree in the number of lines, the column on which the second Epistle is written being wider than that on which the third Epistle is written; this latter column has been narrowed in order to make room for a much wider column in the Epistle of Jude, which sometimes contains as many as 29 letters to the line.

In this MS the books do not begin uniformly at the top of the page, which shows that the orderly arrangement of the original matter is disappearing. Thus, I John does not begin at the head of a page; we have first 29 lines, then 9 columns, then 47 lines, and so we end near the foot of a column. II Cor. begins in the middle of a page; we have 21 lines, then a column of 49 lines only, then 18 more columns counting the three lost leaves, and then 18 lines. One thing, however, is very remarkable in the table, and that is the way in which the concluding lines group themselves around the numbers which are multiples of ten. It will be worth while examining this point.

Theoretically, the terminal digits of the lines 1, 2, 3, . . . 0 ought to be tolerably evenly distributed, but when we examine we find

0 occurs once.	5 occurs not at all.
1 " 4 times.	6 " 4 times.
2 " once.	7 " 4 times.
3 " once.	8 " 8 times.
4 " once.	9 " 4 times.

Now this extraordinary preference for the numbers 1, 6, 7, 8, 9 is not accidental, but is a survival of the original methods of arranging the documents.

The fact is that this document was probably originally reduced from documents of which one page is equivalent to the fifth part of the Alexandrian column ; and the matter of the original documents was so arranged that the final page was more than half filled. This explains the preference for the endings which occupy the latter halves of the decades. The question arises, was this arrangement of the matter arbitrary, or are there any residual traces of the original pages ?

An examination of this point will, I think, show that there was a time when the fifth of the column of Codex A was a V-page, but the traces have almost disappeared. This may be seen to be roughly the case by calculating the letters for 10 Alexandrian lines, which amount to something over 230, not far from the average letters of a V-page. And the suspicion is confirmed by remarking that the II and III of John, which are a column in A, are 5 V-pages. The arrangement would be suggested by the fact that the number of pages in so many of the different Epistles is a multiple of five or near it. We may detect the residual traces of the primitive form by taking some portion of an Epistle and examining its texts side by side for the two codices. Let us take the beautifully uniform writing of Codex B as our measuring line ; and begin with one of the shortest Epistles, say the II John. By hypothesis 10 lines of A ought to be one V-page. Actually the first ten lines of A have lost two letters from the first fourteen lines of B. The scribe crowds the next line with five or six extra letters, and by the end of his 20th line is two letters ahead of the pattern. By the 30th line he is 6 or 7 letters ahead, and by the 40th line he is 12 letters ahead, thus enabling him to finish the epistle in nine more lines.

Next, let us try the first Epistle of John. The 10th line of A does not agree with the 14th of B in its ending, but we note a coincidence in ending of the

11 of A and the 14 of B

and the following successive coincidences at ending—

23 of A and the 31 of B	60 of A and the 76 of B
33 " 44 "	62 " 79 "
48 " 64 "	65 " 83 "

These give us the following and other relations between the A and B line :

$$\begin{aligned}
 A &= \frac{1}{2} B \\
 A &= \frac{1}{3} B \\
 A &= \frac{1}{6} B \\
 A &= \frac{1}{4} B \\
 A &= \frac{1}{5} B \\
 A &= \frac{1}{7} B \\
 \text{so } A &= \frac{1}{11} B, \text{ and so on,}
 \end{aligned}$$

the variety of which is striking ; and the results vary much from our hypothesis $A = \frac{1}{5} B$.

The same irregularity in the text of A may be illustrated by studying the Epistle to the Galatians. The first 10 lines are exactly a V-page. The next 11 lines are a V-page and 8 letters. The next 10 lines bring us into agreement with the foot of the Vatican column all but a single letter ; so that in these three V-pages Codex A has gained a line on its normal type. Or take the Gospel of John : The first 11 lines of A contain the V-page and 2 letters. The first 22 lines contain exactly the two V-pages. The next twelve lines contain a V-page and 2 letters. The next eleven lines end five lines in advance of the V-page ; and finally the scribe succeeds in ending his page exactly with the 8th line of a V-page. So that A is exactly six lines behind time on its first column.

It is a wonder, when we examine the irregular writing of A, that we were able to find any trace at all of its original pattern, if indeed we have found it correctly.

2. The following table, in which, by the hypothesis, the pages of Codex A are approximately reduced to V-pages and compared with the Vatican Codex, will be useful :

	<i>A</i>	<i>B</i>
Mark	251	232
Luke	432	411
John	310	292
Acts	401	391
James	40	38
I Peter	40	38
II Peter	26	26 or 27
I John	52 or 53	51
II John	5	5

	<i>A</i>	<i>B</i>
III John	5	5
Jude	11	11
Romans	194	148
I Corinthians	132?	139
II Corinthians	99	95
Galatians	49	47
Ephesians	54	49
Philippians	35	33
Colossians	35	34
I Thessalonians	33	32
II Thessalonians	18	18

It will be seen that the type has almost disappeared except from the shorter writings. Codex A, then, is a document degenerate in type, but bearing traces of a distant genealogical relation to MSS of the pattern conserved by B.

3. If we take another instance, say Codex Augiensis, a bilingual codex collated by Scrivener, we have a tolerably even Greek text, containing 27 or 28 lines to the column, but the number of letters to the line fluctuates between wider limits than in previous cases. We may put—

	<i>Columns.</i>	<i>Lines.</i>
Romans	—	15
I Corinthians	50	27
II Corinthians	34	27
Galatians	17	15
Ephesians	18	9
Philippians	12	22
Colossians	13	6
I Thessalonians	11	17
II Thessalonians	5	25
I Timothy	13	18
II Timothy	10	2
Titus	6	6
Philemon	2	16

Here all trace of the ancient endings has disappeared, and the only thing noticeable in the endings is an accidental recurrence of multiples of 9.

E. 1. Leaving for a while the criticism of the New Testament, we now proceed to discuss and apply the general method of determining the forms of autographs of any series of letters.

If there were but a single size of letter-paper in use, and a single model to intimate the breadth and number of the lines which ought normally to be found upon each separate sheet, the following phenomena would present themselves in the study of any given collection of letters :

First, there would be a very great scarcity of letters ending at the first few lines of a page ; and secondly, as we move down the length of the page, we should find a greater number of letters ending at the successive places in the page. Let us call the number of epistles which occupy approximately any given space (the space itself being measured either by the lines of the paper or in any other way) the frequency for the space. Then we say that for letters occupying between n and $n+1$ standard pages, the frequency would be a maximum somewhere near the close of the $n+1$ th page, because there is a tendency, other things being equal, to end one's epistles rather at the bottom of a page than near the top.

For convenience, we shall now change slightly our method of statement ; we reserve the word *letter* for printed or written type, and use *epistle* for the document ; this will save confusion ; and we define as follows :

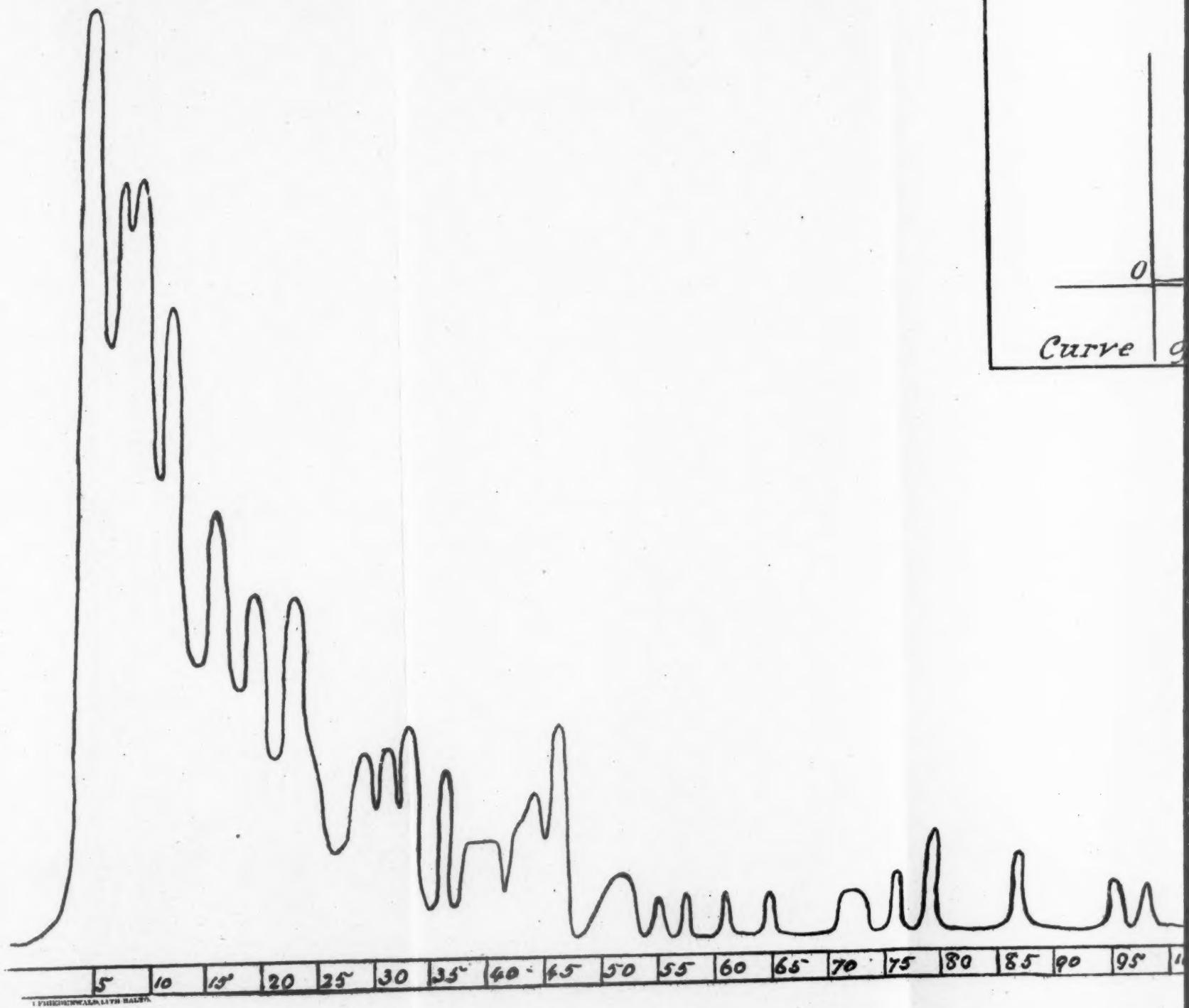
2. If x be the size of an epistle, expressed in lines of some standard length, or in actual letters, then the number of epistles in a given collection which occupy sizes between $x \pm \epsilon$ where ϵ is some small arbitrary quantity, is called the frequency for that size, and is denoted by $f(x)$. We construct the curve of frequency in the usual manner, and according to our reasoning it runs in the manner expressed by the small curve in the corner of the annexed plate. The meaning of this curve is simply this, that if any length ON be taken representing the length of a given epistle, then PN represents the frequency of epistles of that size.

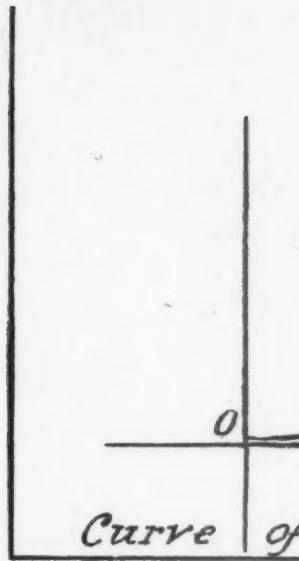
In our figure OA is a single page, OB two pages, and so on ; and the curve intimates that the frequency is a maximum just before we reach OA , OB , OC , etc., and that the frequency diminishes precipitately when we pass the points A , B , C , etc.

If now we assume a second size of paper and corresponding pattern, we should simply have to trace a second curve with its series of maxima over the first, and the complete system would represent the frequency. And the same would be the case if there were three, four or more patterns.

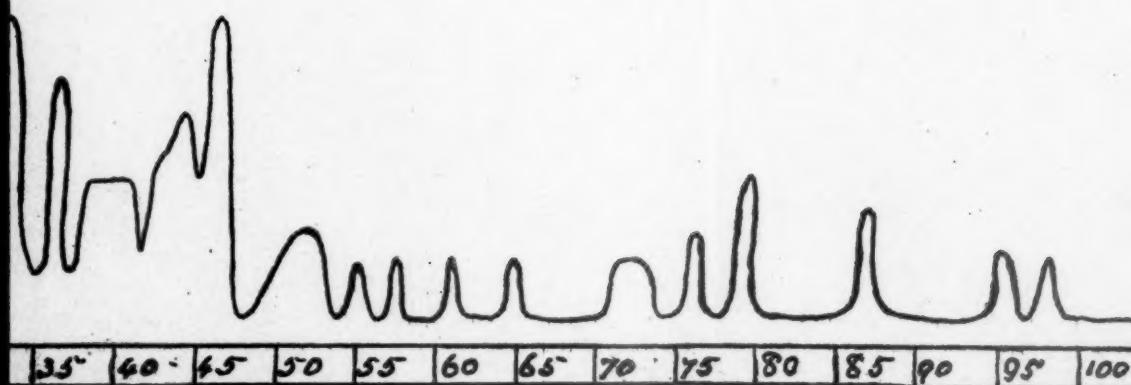
3. Conversely, if the curve were traced for us we ought to be able to determine very closely the normal sizes of the patterns of original writing. And it is to this problem that we address ourselves, since we have not a few collections of such ancient writings, and have strong evidence that the writers of those epistles used fixed models by which to write. Not to spend time in giving well-known quotations, we simply refer to Isidore, *Orig. VI* 12: "Quaedam genera librorum certis modulis conficiebantur; breviori forma carmina atque epistulae"; and observe with Birt, *Das Antike Buchwesen*, p. 288, and Reifferscheid, that the expression of Isidore is really taken from Suetonius. We will now commence to analyse the epistles of Pliny and to determine their modulus or pattern.

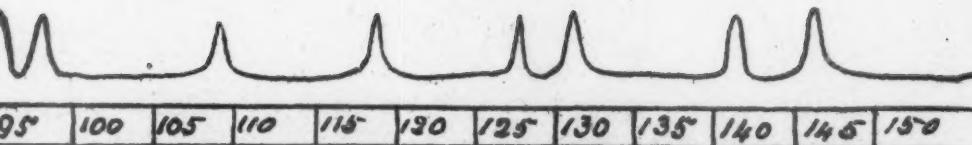
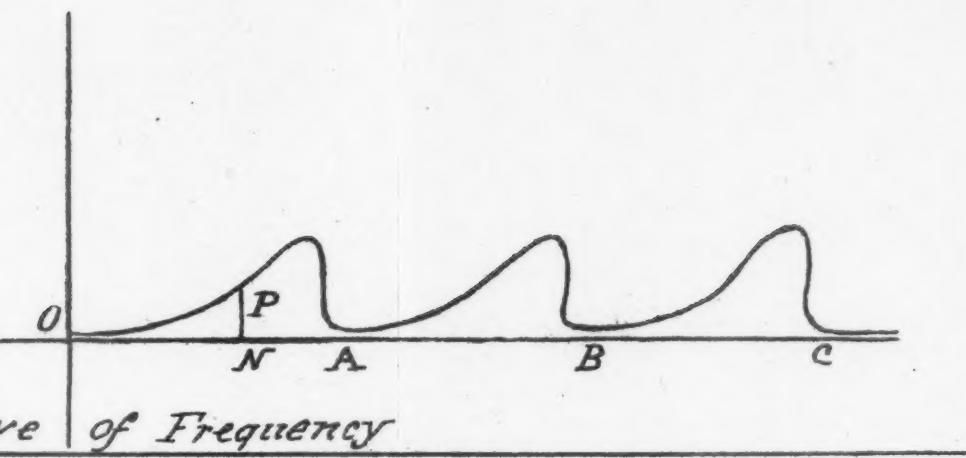
4. The table which follows will express the size of the different epistles as nearly as possible in terms of the number of lines which they occupy in the Teubner edition. Then from the complete tabulated results we will construct our curve, roughly to scale, and deduce the size of the normal Pliny epistle in terms of the Teubner line.





Curve of







<i>No. of Teubner Lines.</i>	<i>Book I.</i>	<i>Book II.</i>	<i>Book III.</i>	<i>Book IV.</i>	<i>Book V.</i>	<i>Book VI.</i>	<i>Book VII.</i>	<i>Book VIII.</i>	<i>Book IX.</i>	<i>Book X.</i>	<i>Total.</i>
111											0
112											0
113											0
114											0
115											0
116											0
117											0
118											1
119											0
120											0
121											0
122											0
123											0
124											0
125											0
126											0
127											0
128		I									1
129											0
130											0
131							I				1
132											0
133											0
134											0
135											0
136											0
137											0
138											0
139											0
140					I						1
141											0
142											0
143											0
144											0
145											1
146		I									

5. The curve is now approximately constructed, and is given in the annexed plate.

From the arrangement of the maxima in the curve of frequency we have now to deduce the normal form.

Our largest epistle is 146 lines of Teubner type; now we have Pliny's own statement that there are never more than twenty sheets

to a scapus or roll, and although this statement is not strictly accurate, we have a right to assume it to be so for Pliny himself. Suppose then that this 146 lines is just under 20 sheets, this would make the single sheets just over 7.3 lines; and we should expect to find successive maxima near the points $x = 7.3$, $x = 14.6$, $x = 21.9$, $x = 29.2$, and so on; or, beginning with the figures in reverse order, we look for maxima at the points 139.7, 132.4, 125.1, 117.8, 110.5, 103.2, 95.9, 88.6, 81.3, 74, 66.7, 59.4, 52.1, 44.8 and so on. This is found to be almost exactly the case for many of the places indicated. The higher maxima above $x = 50$ are at once seen to be parts of the same system; but the lower numbers of the system seem to be a little too small.

The single sheet estimated at 7.3 Teubner lines is a little wrong in its decimal place, and probably should be 7.5 or 7.6. For it is evident that the 20th page of the letter in question (III 9) was not quite filled. He says, "Hic erit epistolae finis, re vera finis; litteram non addam." Taking the latter estimate, and observing that the average Teubner line may be put at 50 letters (which is very nearly the case), we have 380 letters to the Pliny page, which is just over 10 average hexameters; in all probability, then, the majority of the Pliny epistles, especially the longer ones, are written on a 20-lined page of half-hexameters. Whether in the smaller epistles a smaller pattern is sometimes used does not at present appear; but certainly almost all the long ones are very nearly of the pattern indicated.¹

6. We are able to apply our result to one interesting example.

In Pliny IV 11 we have an epistle of about 61 Teubner lines, in which the writer concludes by demanding an equally long reply, and threatens to count not only the pages of the answer, but the lines and syllables. "Ego non paginas tantum sed versus etiam syllabasque numerabo." From the fact that the epistle is not quite 61 Teubner lines, and since $8 \times 7.6 = 60.8$, we infer that he actually finished the last sheet very closely. The allusion, then, to counting lines and syllables does not refer, as one might have at first supposed, to a superfluous page, but to his purpose not to be satisfied with an eight-paged epistle in reply unless the pages contain 20 good lines to the page, and each line of a proper length.

¹ For instance, if the normal page were 7.4 lines, there would not be more than about 3 out of the 20 longest epistles in which the concluding page was not more than half filled.

Birt (Das Antike Buchwesen, p. 161) has curiously underestimated the length of this epistle; he describes it as a long epistle, which must have occupied over *two* pages, and infers that the desired reply is to have at least *three* pages, the third of which is to carry ten additional lines, together with a half line of ten syllables.

It may be interesting to note that the celebrated letter of Pliny to Trajan (X 96) is written on a roll of seven sheets, wanting a couple of lines or thereabouts. The answer occupies about a sheet and a half of the same style of writing.

There are traces of the use of a smaller page of 20 half-iambics, or about 5.7 Teubner lines. Perhaps it is to this model and a roll of 5 sheets that Pliny refers, when he says (III 14), about the 22d line, "Charta adhuc superest." The whole letter is not 30 lines. But it may almost as well be taken as a 4-paged letter of the larger size.

We can now print the Pliny letters from their autographs approximately.

7. It will be observed that the previous investigation enables us at once to fix a superior limit to the number of pages in the separate books to which the letters are reduced. A full page of the Teubner edition is 38 lines or 5 Pliny pages. The first book cannot therefore contain more than 105 Pliny pages. The second book gives precisely the same estimate, so does the third, and the fourth, and the fifth; the sixth gives 120 as the superior limit, the seventh 110, the eighth 105, the ninth 120, the tenth 150. *Could we have a more forcible suggestion that, in the majority of cases, the letters were actually reduced into rolls of 100 sheets apiece when they came to be edited?*

8. A precisely similar analysis applied to the Tauchnitz text of Josephus enables us to determine the original form of many of the documents embedded in his writings. We have extracted between 60 and 70 letters and decrees from the Life and the Antiquities.

The results arrange themselves as follows:

Tauchnitz lines.	No. of Epistles of that length.	Tauchnitz lines.	No. of Epistles of that length.
3	1	8	5
4	7	9	2
5	0	10	1
6	1	11	5
7	6	12	5

Tauchnitz lines.	No. of Epistles of that length.	Tauchnitz lines.	No. of Epistles of that length.
13	1	27	1
14	2	28	1
15	2	29	0
16	1	30	2
17	3	31	0
18	1	32	0
19	0	33	0
20	4	34	1
21	1	35	1
22	1	37	1
23	2	43	2
24	3	54	1
25	1	60	1
26	0		

Here we are at once struck with the recurrence of the multiples of four, and examination at once shows that four lines of Tauchnitz type in Josephus are 12 half-iambics or an S-page very exactly. Similar examination will show that a page of 20 half-iambics is 6.6 Tauchnitz lines, and a page of 20 half-hexameters is 11.6 lines. From these results the majority of the writings indicated are at once reduced to their original patterns. The recurrence of the S-type simply means that Josephus has manufactured not a few of them, as letters would have been written by his own hand, for we have already determined, from the stichometry of the Antiquities, and confirmed the result by the examination of certain letters, that Josephus uses the iambic verse as his model.

ERRATA.

P. 3, lines 10 and 11 from bottom, read *passage* for "sentence."

P. 7, line 22 from top, read *is roughly represented by* for "is represented by."

P. 19, last line, read *Engastrimytho* for "Engastrimutho."

P. 22, line 21 from top, read *Saligniana* for "Saligniani."

P. 24, lines 16 and 15 from bottom, read *To this type belong the MSS formerly known as I, N, Γ (which are fragments of the same original);*

